

CRPL-F 253 PART B

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OCT 11 1965

PART B  
SOLAR - GEOPHYSICAL DATA

ISSUED  
SEPTEMBER 1965

U. S. DEPARTMENT OF COMMERCE  
NATIONAL BUREAU OF STANDARDS  
CENTRAL RADIO PROPAGATION LABORATORY  
BOULDER, COLORADO



## SOLAR - GEOPHYSICAL DATA

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The descriptive text was republished in November 1964. Addenda have been given in the introduction to each of the CRPL-F Part B reports, December 1964 through August 1965.

### 169 Mc/s Solar Interferometric Observations

The 169 Mc/s interferometric observations are recorded around local noon at Nancay, France (N 47°23', E 8<sup>m</sup> 47<sup>s</sup>), the field station of the Meudon Observatory. The main lobes are parallel to the meridian plane: the half-power width is 3.8 minutes of arc in the East-West direction. The main lobes are about 1° apart (Ann. Astroph. 20, 155, 1957). The records give the strip intensity distribution from the center of the disk to 30' to the West and East.

These daily distributions are plotted on the same chart giving diagrams of evolution. Points of equal intensity given in relative units are joined day after day in the form of isophotes. Four equal intensity levels have been chosen to draw the isophotes. These intensities are proportional to 0.6, 1, 1.5 and 2. The scale is completely arbitrary. The first level corresponds to the sun without any radio storm center.

A bracketed line indicates the width of the recorded lobe pattern in the East-West direction, taking into consideration the scale of the map (given by the size of the optical sun diameter).

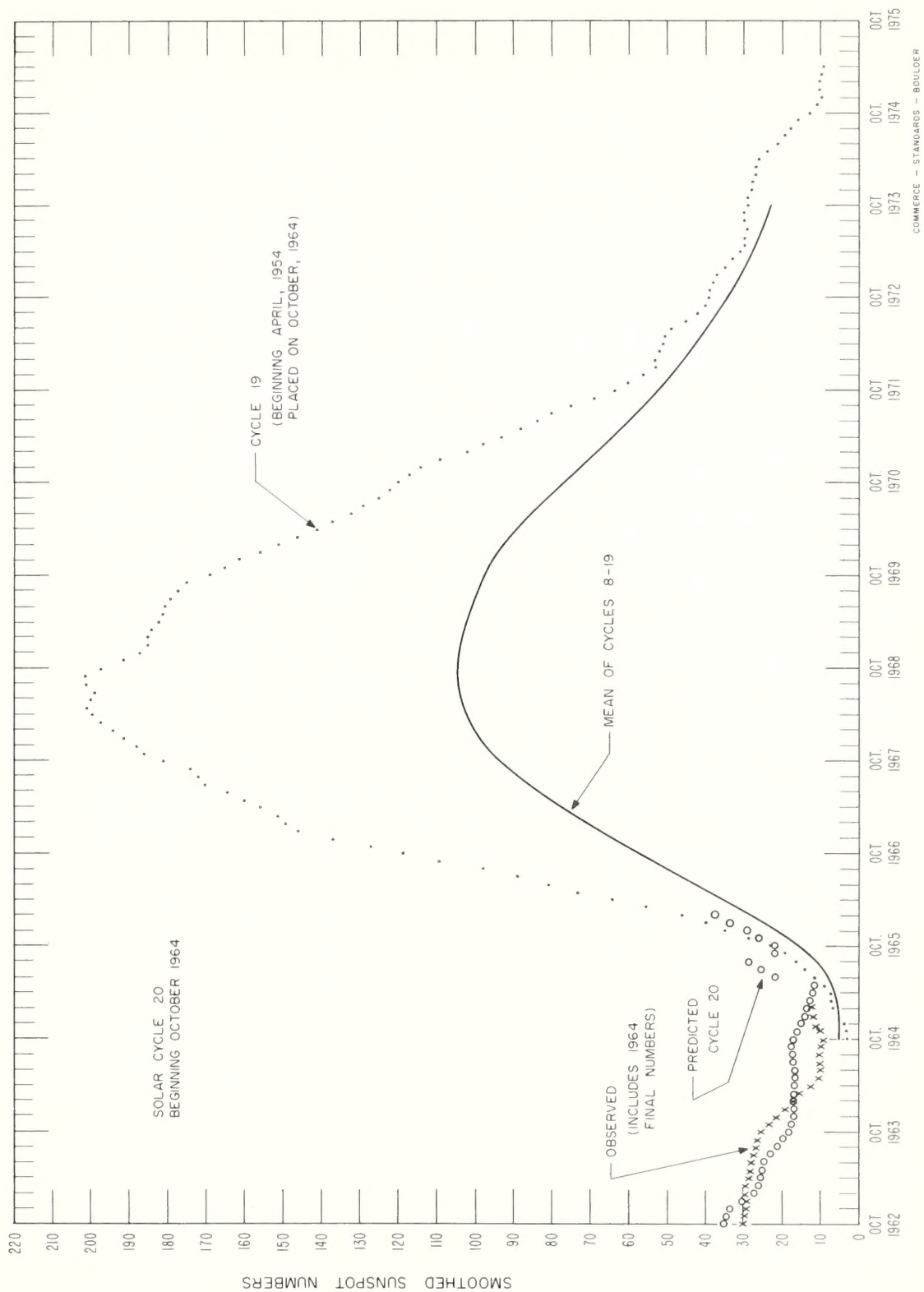
In each noisy radio region the smoothed intensity around noon is given in  $10^{-22} \text{ W/m}^2/\text{c/s}$ .



## DAILY SOLAR INDICES

July 1965	American Relative Sunspot Numbers $R_A'$
1	12
2	9
3	6
4	6
5	3
6	13
7	22
8	20
9	22
10	19
11	20
12	25
13	15
14	14
15	11
16	11
17	4
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	1
30	5
31	0
Mean:	7.7

August 1965	Zürich Provisional Relative Sunspot Numbers $R_Z$	Daily Values Solar Flux at 2800 Mc, Ottawa, Canada Flux	
		S	$S_A$
1	0	72.0	74.2
2	0	(73.0)	(75.2)
3	15	77.3	79.6
4	14	78.4	80.7
5	0	76.3	78.5
6	16	78.8	81.1
7	7	79.6	81.8
8	31	77.3	79.5
9	10	77.6	79.8
10	14	76.1	78.2
11	16	76.7	78.8
12	13	75.9	77.9
13	8	74.8	76.7
14	7	73.7	75.6
15	0	72.5	74.4
16	0	73.8	75.6
17	0	72.4	74.2
18	7	73.2	75.0
19	0	74.3	76.1
20	7	73.7	75.5
21	7	73.6	75.3
22	0	72.9	74.6
23	0	73.0	74.6
24	8	72.7	74.3
25	0	72.2	73.8
26	8	72.0	73.5
27	14	74.5	76.0
28	18	73.2	74.7
29	16	74.2	75.7
30	10	75.0	76.4
31	22	74.9	76.3
Mean:	8.6	74.8	76.6



PREDICTED AND OBSERVED SUNSPOT NUMBERS

## CALCIUM PLAGE AND SUNSPOT REGIONS

AUGUST 1965

AUGUST 1965	LAT.	MCMATH PLAGE NUMBER	RETURN OF REGION	CALCIUM PLAGE DATA						SUNSPOT DATA		
				CMP VALUES		HISTORY	AGE (ROTA- TIONS)	DATE FIRST SEEN	DURA- TION (DAYS)	CMP VALUES		HISTORY
				AREA	INT.					AREA	COUNT	
1.3	N18	7939	New	(200)	(2.0)	b / $\ell$	1	8/7	2			
3.2	N33	7928	New	400	2.0	b \ d	1	7/30	7	(10)	(1)	b - d
3.4	N18	7943	New	(700)	(3.0)	b - $\ell$	1	8/8	2			
5.0	S01	7940 (1)	New	(100)	(2.0)	b - d	1	8/6	1			
5.1	N22	7927	7886	1100	2.0	$\ell$ $\wedge$ $\ell$	2	7/29	13			
5.1	N38	7930	New	300	2.5	b - d	1	8/3	3	10	1	b - d
6.8	S25	7941 (1)	New	100	1.5	b - d	1	8/6	1			
7.0	N01	7937	New	100	1.5	b - d	1	8/5	2			
7.3	S18	7938	New	(100)	(1.5)	b - d	1	8/5	2			
8.4	N18	7934 (1)	New	(200)	(1.5)	b - d	1	8/4	1			
8.5	N26	7946 (1)	New	(200)	(2.0)	b - d	1	8/12	1			
8.6	N01	7942 (1)	New	(200)	(1.5)	b - d	1	8/6	1			
9.1	S23	7931	New	1200	3.0	$\ell$ \ $\ell$	1	8/3	12			
10.2	N25	7932 (2)	New	1800	2.5	$\ell$ \ $\ell$	1	8/3	14			
10.3	S27	7936	7892	1100	2.5	$\ell$ $\wedge$ $\ell$	3	8/4	13	10	7	b - d
11.7	N36	7935 (3)	New	2400	3.0	$\ell$ $\wedge$ $\ell$	1	8/4	15	(20)	(6)	b \ d
12.2	S34	7944	New	(700)	(1.0)	b - d	1	8/10	2			
14.5	S07	7945 (1)	New	(200)	(2.0)	b - d	1	8/10	1			
15.1	S06	7949 (4)	New	200	2.0	b - d	1	8/14	3			
16.3	N27	7948	New	(200)	(1.5)	b - d	1	8/13	2			
17.5	N29	7947	New	300	2.5	b - $\ell$	1	8/12	12	(20)	(1)	b \ d
17.7	N22	7950	New	(100)	(2.0)	b - d	1	8/15	2			
17.7	S21	7953 (1)	New	100	1.0	b - d	1	8/17	1			
17.9	N02	7954	New	(100)	(1.5)	b - d	1	8/18	2			
18.6	N09	7951	New	200	1.5	b - d	1	8/16	4	10	2	b - d
20.0	N10	7955 (1)	New	(100)	(2.0)	b - d	1	8/18	1	(10)	(1)	b - d
21.4	N23	7962	New	(300)	(1.5)	b - $\ell$	1	8/27	1			
22.4	N24	7952	New	(600)	(1.0)	$\ell$ - d	1	8/16	10			
22.9	N04	7957	New	(100)	(1.0)	b - d	1	8/20	2			
23.8	N03	7963 (1)	New	(200)	(2.0)	b - d	1	8/27	1			
24.1	S09	7966 (1)	New	(200)	(2.0)	b - d	1	8/28	1			
25.0	N32	7958	7913	1000	2.5	$\ell$ \ $\ell$	4	8/19	12			
25.3	N25	7956 (5)	New	1400	3.0	$\ell$ \ $\ell$	1	8/18	13	10	3	b - d
25.7	N11	7959	New	200	1.0	b - d	1	8/22	4			
27.4	N26	7960	New	300	1.0	b \ d	1	8/22	7			
27.9	N14	7972	New	(300)	(2.0)	b - $\ell$	1	9/2	1			
28.3	S09	7967	New	100	2.0	b - d	1	8/28	1			
29.4	N37	7965 (1)	New	(200)	(1.5)	b - d	1	8/27	1			
30.4	N28	7961	New	900	3.0	$\ell$ $\wedge$ $\ell$	1	8/23	14	10	1	b - d
30.4	N02	7968	New	200	2.0	b $\wedge$ $\ell$	1	8/29	8	(10)	(2)	b - d

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- (1) These small and ephemeral plages were seen on the disk for only one day.  
 (2) Region 7932 is a new plage, near the position of old plage 7891, but at a much higher latitude.  
 (3) Region 7935 is a new plage, near the position of the weak and short-lived plage 7895.  
 (4) Region 7949 is a new plage that develops on the disk late in the day on the 14th, in the same position as the short-lived plage 7942.  
 (5) Region 7956 is primarily a new plage, although it contains weak remnants of old plage 7918.

No calcium spectroheliograms were secured at the McMath-Hulbert Observatory on August 2 and 31, 1965.

Errata: The plage regions listed for June 1965 in CRPL-F 251 Part B as 8777, 8774 and 8773 should read 7877, 7874 and 7873.



# MT. WILSON MAGNETIC CLASSIFICATIONS OF SUNSPOTS

11b

AUGUST 1965

AUG. 1965	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.	AUG. 1965	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
1	No Spots					11	2435	S30	W28	$\beta$ p	15949
2	2335	N25	W68	$\alpha$ f	15940	12	No Obs.				
3	1610	N37 N25 S24	E17 E80 E72	$\alpha$ p $\alpha$ f $\alpha$ f	15941 15942 15943	13	2450	N29	W23	$\alpha$ p	15950
4	1605	N37	E06	$\alpha$ f	15941	14-18	No Spots				
5	No Spots					19-20	No Obs.				
6	2345	S31	E37	$\alpha$ p	15944	21-25	No Spots				
7	1745	S30 S24 N36	E31 E19 E52	$\beta$ p* $\beta$ f $\beta$ f	15944 15945 15946	26	1745	N27	E47	$\beta$ f	15951
8	2400	N34	E35	$\beta$ p	15947	27	No Spots				
9	1720	N34	E25	$\beta$ p	15947	28	1730	N27	E20	$\alpha$ p**	15951
10	2310	N31 S26	E22 W26	$\beta$ f $\beta$	15948 15949	29	1700	N27 N03	E07 E11	$\beta$ p $\beta$ p***	15951 15952
						30-31	No Obs.				

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- \* Polarities reversed for new cycle
- \*\* Reappearance
- \*\*\* Old cycle

## PROVISIONAL CORONAL LINE EMISSION INDICES

AUGUST 1965

CMP Aug 1965	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G <sub>6</sub>	G <sub>1</sub>	R <sub>6</sub>	R <sub>1</sub>	G <sub>6</sub>	G <sub>1</sub>	R <sub>6</sub>	R <sub>1</sub>	G <sub>6</sub>	G <sub>1</sub>	R <sub>6</sub>	R <sub>1</sub>	G <sub>6</sub>	G <sub>1</sub>	R <sub>6</sub>	R <sub>1</sub>
1	3	19	17	26	4	11	18	23	x	x	x	x	x	x	x	x
2	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
5	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
6	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
7	13	40	12	15	6	7	17	23	x	x	x	x	x	x	x	x
8	x	71	15	23	x	x	30	40	x	x	x	x	x	x	x	x
9	30	97	8	21	39	97	24	45	x	x	x	x	x	x	x	x
10	54	97	8	21	33	77	24	45	x	x	x	x	x	x	x	x
11	30	63	23	32	23	36	14	20	x	x	x	x	x	x	x	x
12	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
13	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
14	x	x	x	x	x	x	12	15	4	7	35	50	8	16	39	72
15	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
16	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
17	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
18	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
19	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
20	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
21	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
22	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
23	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
24	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
25	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
26	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
27	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
28	5	7	35	53	5	12	36	43	x	x	x	x	16	22	21	35
29	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
30	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
31	x	x	x	x	x	x	x	x	1	4	x	x	11	17	x	x

x = no observations

\* = yellow line emission

a = index computed from low weight data

# SOLAR FLARES

AUGUST 1965

OBSERVATORY	DATE AUG 1965	OBSERVED UNIVERSAL TIME		LOCATION			DURA TION — MINUTES	IM POR TANCE	OBS COND	TIME U T	MEASUREMENTS			MAX WIDTH H <sub>g</sub>	MAX INT	REMARKS
		START	END	APPROX LAT	MER DIST	MGNATH PLAGE REGION					MEAS AREA Sq Deg	CORR AREA Sq Deg				
LOCK	02	2004	2025	526 E76	7931		65	1-	C	2009	.20	.60		10		
LOCK	03	1930	2035	N27 E80	7932			1-	C	2023	1.10	3.30		20	HK	
HALE	03	1932	1949	N27 E75	7932			1-	2 C	1936	.20	.50			D	
MCMA	03	1938	2016	N27 E85	7932			1-	1 P	1949	.20				E	
HUAN	03	2020	2027	N28 E82	7932			1-	2 C	2024	.50				H	
HALE	03	2020	2034	N28 E75	7932		14	1+	2 C	2023	.60	1.40		19	HK	
SACP	03	2219	2259	N28 E78	7932		36	1-	C	2247	.61	1.45		20	HK	
LOCK	03	2222	2258	N27 E80	7932			1-	2 C	2230	.80	2.40			HK	
HALE	03	2224	2259	N27 E75	7932			1-	P	2232	.20	.54		18	J	
HUAN	03	2225	2313	N28 E80	7932			1-	2 C	2307	.50	1.00		10	J	
SACP	03	2303	2319	N26 E75	7932			1-	2 C	2306	.30	1.10		20	K	
LOCK	03	2304	2315	N26 E71	7932			1-	1 P	0005	.50	1.40				
HALE	03	2304	2315	N27 E72	7932			1-	C	0006	.60					
HALE	03	2358	0008	N27 E72	7932			1-	P							
LOCK	03	2358	0015	N27 E78	7932			1-	C							
LOCK	03															
SACP	04	0000	0010	N28 E77	7932			1-	P		.39	.90		18	G	
IKOM	04	0007	0011	N25 E75	7932			1-	V						K	
HALE	04	0212	0256	N27 E73	7932			1-	2 C	0216	.20	.40				
MITK	04															
MITK	04	0227	0240	N27 E77	7932			1-	C							
MITK	04	0258	0303	N27 E77	7932			1-	C							
HALE	04	0258	0304	N26 E72	7932			1-	1 C	0300	.30	.60			DG	
HALE	04	0429	0448	N27 E72	7932			1-	2 P	0434	1.20	2.40			DG	
MITK	04	0430	0450	N27 E77	7932		19 D	1	2 C						HG	
HALE	04	0439	0447	N29 E73	7932		20	1-	C							
MITK	04	0513	0522	N27 E77	7932			1-	2 C	0441	.30	.70			DG	
KANZ	04	0714	0724	N26 E73	7932			1-	C						DGH	
KANZ	04	0740	0745	N39 E90	7935			1-							A	
KANZ	04	0859	0906	N27 E36	7932		7 D	1-	2	0900	.65	.81			DG	
ARCE	04	0900	0908	N22 E85	7932			1-	2						DGH	
KANZ	04	0944	0953	N29 E82	7932			1-							DGH	
KANZ	04	1016	1024	S28 E66	7936			1-								
OTTA	04	1215	1250	N30 E82	7932		35	1-	2 C	1234	.89	2.44			DGH	
KANZ	04	1419	1459	N29 E76	7932			1-	2 C							
HALE	04	2102	2113	N30 E71	7932			1-	2 C	2106	.20	.40				
LOCK	04	2102	2114	N28 E74	7932			1-	C	2105	.40	.80		10		
LOCK	05	1655	1737	S32 E58	7936			1-	C							
LOCK	05	1830	1905	S31 E57	7936			1-	C	1720	.30	.50		10	J	
LOCK	05	1905	1945	N37 W09	7930			1-	C	1845	.30	.50		10	J	
SACP	05	2017	2048	N37 W09	7930			1-	C	2027	.30	.30		10	J	
MCMA	05	2021	2039	N37 W10	7930			1-	C	2027	.57	.60		18		
HALE	05	2024	2035	N37 W09	7930			1-	2 C	2027	.20	.20			DH	
HUAN	05	2024	2037	N37 W11	7930			1-	C	2028	.20	.24			D	
LOCK	05	2105	2200	S30 E54	7936			1-	C	2120	.30	.50		10	J	
LOCK	06	0005	0110	S29 E53	7936			1-	C	0040	.30	.50		10		

# SOLAR FLARES

AUGUST 1965

OBSERVATORY	DATE AUG 1965	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	TIME		MEASUREMENTS		MAX WIDTH H <sub>g</sub>	MAX INT	REMARKS
		START	END	APPROX LAT	MER DIST	MEMATH PLACE REGION				U T		MEAS AREA Sq Deg	CORR AREA Sq Deg			
KANZ	06	0752 E		N27 E45		7932		1-	2 P	1108		.41	.41			DGH
OTTA	06	1056 E	1126 D	N17 E25				1-	2 P	1120		.23	.25			H
OTTA	06	1114 E	1135 D	S09 W32				1-								H
KANZ	06	1325 E	1355 D	N38 E67		7935		1-								H
LOCA	06	1425 E	1440	N38 E69		7935	15 D	1-	S			.18				D
HUAN	06	1445 E	1456	N36 E69		7935		1-	C	1448		.18				D
HUAN	06	1452 E	1658	N36 E69		7935		1-	C	1655		.18				D
OTTA	06	1657	1708	S32 E45		7936		1-	C	1705		.25				H
OTTA	06	1701	1709	S22 W32				1-	C	1704		.13				H
HALE	06	2003	2018 D	S30 E44		7936		1-	2 P	2008		.30				D
MCMA	06	2007	2020	S32 E43		7936		1-	2 C	2010		.40				D
HUAN	06	2148	2155 D	N35 E64		7935		1-	P	2152		.50				D
LOCK	07	0805	0040	N25 E37		7932		1-	C	0017		.60	.70		20	G
MITK	07	0011	0023	N26 E37		7932		1-	C			.50	.60			
HALE	07	0018 E	0034	N25 E37		7932	30 D	1-	1 P	0018		1.21	2.15			
ARCE	07	0853 E	0923 D	N25 E59		7932		1-	2	0853						
KAND	07	0904	0911	N35 E58		7935		1-	2 P	1408		.90	1.00			FH
MCMA	07	1406 E	1420 D	N28 E36		7932		1-	P	1407		.38	.49			E
HUAN	07	1407 E	1410 D	N27 E34		7932		1-								
LOCK	08	0018	0040	N26 E32		7932		1-	C	0026		.80	.80		20	
MANI	08	0020 E	0040 D	N26 E30		7932		1-	2	0027		.44	.44			F
HALE	08	0020	0048	N26 E30		7932		1-	2 C	0024		.60	.70			EH
KANZ	08	0755 E	0917 D	N36 E45		7935	82 D	1+								
BUCA	08	0806	0855	N36 E44		7935		1-	2			1.70				
CAPS	08	0808 E	0820	N37 E50		7935		1-	3	0811		.50			190	D
ISTA	08	0810 E	0830	N34 E44		7935	20 D	1+								
CATA	08	0810	0830	N36 E45		7935		1-	3 C	0815		1.10	1.77		162	E
ARCE	08	0817 E	0825 D	N25 E40		7932		1-	2	0817		1.31	1.76			
ARCE	08	0840 E	0915 D	N25 E40		7932		1-	2	0852		1.34	1.80			
ISTA	08	0850	0915	N35 E45		7935		1-	3			.70	.90		180	D
CAPS	08	0850 E	0925	N39 E50		7935		1-	3	0910		.26	.40		151	DH
CATA	08	1036 E	1055 D	N36 E45		7935		1-	C	1037		.20	.31			DH
HUAN	08	1432	1442	N36 E45		7935		1-		1435						
KANZ	08	1435	1452	N35 E41		7935	17	1								
KAND	09	0936	1002	N24 W20				1-								
KANZ	09	0946 E	0957	N50 E23		7935	11 D	1-								DH
LOCK	09	1605	1640	N34 E22		7935		1-	C	1622		.40	.40		10	DH
KANZ	09	1610 E	1650	N31 E22		7935	40 D	1-								DH
KANZ	09	1610 E	1656 D	N35 E17		7935	46 D	1-								DH
MCMA	09	1632 E	1657 D	N35 E22		7935		1-	2 P	1633		.30	.40			E
MITK	10	0042	0052	N18 W90		7943		1-	C							G
ARCE	10	0941 E	0952 D	S32 E09		7936		1-	3	0945		.69	.87			
MCMA	10	1946	1957	S33 W12		7936		1-	1 P	1948		.30	.30		10	DH
LOCK	10	1948	2020	N37 E14		7935		1-	C	2003		.30	.30			
MCMA	10	2036	2045	S33 W12		7936		1-	2 C	2040		.20	.30			D
HALE	11	0156	0234	S31 W15		7936		1-	2 C	0208		.70	.80			F



# SOLAR FLARES

AUGUST 1965

OBSERVATORY	DATE AUG 1965	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				REMARKS	
		START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.				MATH- PLAGE REGION	TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		MAX. WIDTH H <sub>g</sub>
MANI	11	0203 E	0253 D	0209	S21 W34	7931		1-	2	0209	1.00	1.10			
HALE	11	0244	0249	0247	S33 W14	7936		1-	2 C	0247	.10	.10			HJ
HALE	11	0321	0343	0324	S30 W20	7936		1-	2 C	0324	.20	.20			
CAPS	11	0629 E	0653		S30 W18	7936		1-	3	0631	.40	.50		157	DH
KAND	11	0957	1019		S31 W19	7936		1-							
MCMA	11	1559 E	1650	1602	S32 W22	7936		1-	2 C	1620	.40	.60			E
MCMA	11	1635 E		1620											
KANZ	11	1635 E			S31 W24	7936		1-							E
LOCK	11	1710	1735	1720	S31 W26	7936		1-	C	1720	.30	.30		10	
MCMA	11	1712	1725	1715	S32 W20	7936		1-	2 C	1715	.20	.30			D
OTTA	11	1715	1723 D		S31 W23	7936		1-	1 C	1719	.18	.20			
SACP	11	1715	1741	1721	S30 W23	7936		1-			.43	.50		15	
LOCK	11	1813	1821	1816	S32 W28	7936		1-	C	1816	.40	.40		10	
IKOM	12	0515 E	0526 D		S30 W34	7936		1-	V	0515	.60	.80	.68	80	D
KAND	12	0538	0601		S31 W30	7936		1-							
IKOM	12	0538 E	0615 D		S30 W34	7936		1-	V	0538	.80	1.00		80	D
KANZ	12	0859 E	0915 D		S31 W34	7936		1-							D
KANZ	12	0942 E			S30 W36	7936		1-							
KANZ	12	1009 E	1030 D		S31 W34	7936	21 D	1-							
KANZ	12	1327 E	1340		S28 W44	7936		1-							
MITK	13	0247 E	0254		N37 W19	7935		1-	C						G
MCMA	13	1254	1302	1256	N29 E36	7948		1-	2 C	1256	.30	.40			E
ONDR	13	1256	1305		N30 E38	7948		1-	1						DG
LOCK	14	1628	1639	1633	S33 W66	7936		1-	C	1633	.20	.40			
CAPS	15	0615	0636		S35 W75	7936		2	2	0628	2.00	7.00		180	G
KANZ	15	1328 E	1339 D		N38 W47	7935	21	1-							DG
KANZ	15	1347 E	1400 D		N38 W47	7935		1-							DG
SACP	15	1411 E	1419 U	1412	S33 W79	7936		1-	P		.96	.20		17	DH
MCMA	15	1854	1903	1855	N26 E20	7947		1-	2 C	1855	.20	.20			
LOCK	16	0030 E	0048	0040	N31 E90	7952		1-	C	0040	.30	1.50		10	H
ARCE	16	0920 E	0955 D		N25 W90	7932	35 D	1-	2	0920	.56	3.18			
MCMA	16	2010	2020	2012	N22 E75	7952		1-	1 C	2012	.30				EL
LOCK	17	1812	1835	1824	S34 W80	7936		1-	C	1824	.20	.50		10	
HALE	18	0110	0129	0117	N28 W01	7947		1-	2 C	0117	.40	.40		18	
SACP	18	1432	1442	1437	N23 E84	7956		1-	C		.70				
IKOM	19	2320	2333 D		N20 E70	7956		1-	V						G
CAPS	20	0719	0742		N20 E63	7956		1-		0724	.50	1.00		180	G
HALE	20	1637	1648	1641	N39 W90	7935	11	1+	3	1641	.50				
LOCK	20	1638 E	1644		N38 W90	7935		1-	C	1638	.30	1.50		10	
LOCK	20	1839	1901	1848	N22 E57	7956		1-	C	1848	.50	.80		10	
HALE	20	1846	1903	1852	N23 E56	7956		1-	1 C	1852	.40	.60			
MANI	21	0528 E	0555 D	0530	N38 W43	7947		1-	2	0530	.20	.28			



# SOLAR FLARES

AUGUST 1965

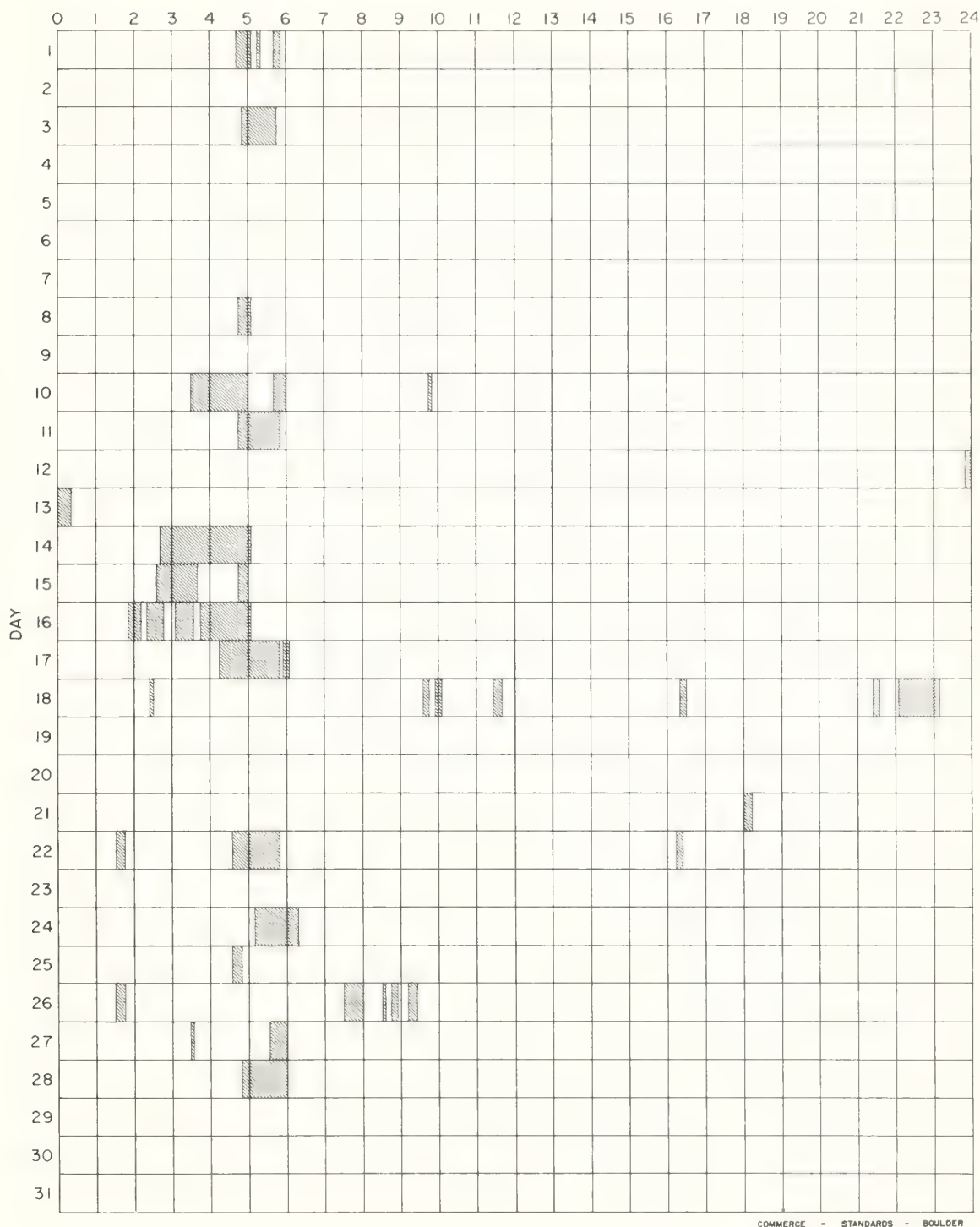
OBSERVATORY	DATE	OBSERVED		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	TIME U T	MEASUREMENTS			REMARKS		
		START	END	MAX PHASE	APPROX.						MC-MATH REGION	MEAS AREA Sq Deg	CORR AREA Sq Deg		MAX WIDTH Ha	MAX INT %
					LAT	MER DIST										
LOCK	AUG 1965	21	2140	2230	N25 E76	7960		1-	C	2148	.40	.80	10	K		
LOCK		21														
KAND		23	0909	0945	N10 E30	7959		1-								
KAND		23	0956	1019	N25 E90	7961		U								
OTTA		23	1504	1511	N28 E90	7961		1-	2 C	1507	.47		10	H		
LOCK		23	1841	1852	N28 E90	7961		1-		1845	.30	1.50				
MCMA		24	2007	2025	N28 E08	7956		1-	1 C	2010	.40	.40		EL		
MCMA		26	1425	1530 D	N27 E50	7961		1-	1 P	1427	.40	.60		FH		
MCMA		26	1821	1912 D	N27 E48	7961		1-	1 P	1832	.30	.40		EH		
ARCE		27	0815 E	0830 D	N27 E40	7961		1-	2	0815	.82	1.14				
ARCE		27	0910 E	0925 D	N27 E40	7961		1-	2	0910	.43	.60				
LOCK		27	2039	2110	N01 E27	7968		1-	C	2045	.20	.20	10			
ARCE		28	0820 E		N27 E28	7961		1-	2	0820	1.11	1.36				
MITK		29	0252 E	0316	N02 E18	7968		1-	C		.20	.20		GH		
HALE		29	0306	0315 D	N02 E18	7968		1-	2 P	0308	.10	.10				
HALE		29	1852	1904	N25 E08	7961		1-	3 C	1857						
ARCE		30	0900 E	0930 D	N26 E00	7961		1-	2	0900	.78	.84	23			
SACP		30	1410	1432 D	N26 W03	7961		1-	C		.87	.86				
ZURI		30	1415 E	1427	N25 W01	7961	12 D	1-	S							
CAPS		30	1415	1430	N26 E00	7961		1-	3	1418	.90	1.00	170	E		
OTTA		30	1601	1632	N27 W04	7961		1-	2	1608	.75	.75		E		
LOCK		30	1720	1744	N24 W04	7961		1-	2 C	1733	.20	.20				
HALE		30	1846	1923	N27 W04	7961	37	1-	3 C	1852	2.10	2.10	20			
LOCK		30	1847	1928	N26 W04	7961		1-	C	1854	1.60	1.60	23			
SACP		30	1853 E	1940 U	N27 W05	7961	47 D	1-	P	1854	2.35	2.34	23			
LOCK		30	2320	2339	N26 W88	7956		1-	C	2327	.20	.60	10	H		
KAND		31		0757	N15 W90	7956		1-						GH		
MITK		31	0625	0645	N22 W90	7956		1-	C							
KAND		31	0801	0822	N15 W90	7956	21	1+								
KAND		31	0902	1030	N15 W90	7956	88	1+								
CAPS		31	1122	1138	S02 W11	7968		1-	2	1126	.40	.40	175	DG		
LOCK		31	2310	2333	N25 W21	7961		1-	C	2314	1.60	1.60	20			
SACP		31	2311	2334	N26 W22	7961	23	1	C	2314	2.56	2.61	28			
HALE		31	2312	2339	N25 W22	7961	27	1	C	2314	2.60	2.60				

COMMERCE · STANDARDS · BOULDER

# INTERVALS OF NO FLARE PATROL OBSERVATIONS PROVISIONAL

AUGUST 1965

HOUR-UT



Observatories included:

Arcetri	Catania	Ikomasan	Locarno	Mitaka	Tortosa
Arosa	Haleakala	Istanbul	Lockheed	Ondrejov	Wendelstein
Bucharest	Herstmonceux	Kandilli	Manila	Ottawa	Zürich
Capri-S (Sweden)	Huancayo	Kanzelhöhe	McMath-Hulbert	Sacramento Peak	

# SOLAR FLARES

MAY 1965

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION		DURATION MINUTES	IM FOR TANCEL	OBS COND	TIME U T	MEASUREMENTS			REMARKS
		START	END	APPROX LAT. DIST	MONTH PLACE REGION					MEAS AREA Sq Deg	COOR AREA Sq Deg	MAX WIDTH Hg	
MITK	01	0235	0240	NO FLARE	PATROL	124 D	1-	C					G
— KANZ	01	0432	0451		N29 E90 7794		2						AG
— IKOM	01	0723 E	0927		N27 E90 7794		1-	V					A
— ARCE	01	0737	0746		N28 E90 7794		1-						
— ARCE	01	0824 E	0835 D		N29 E90 7794		1-		0824	.23	1.31		
— CATA	01	0925 E	0943 D		N29 E90 7794		1-		0925	.42	2.40		
— CLMX	01	0930 E	1000 D	0934	N30 E90 7794		1-	1	0934	.30	1.71		DG
— HUAN	01	1407 E	1731		N26 E85 7794		1-	C	1506	.70	1.90		E
— CAPE	01	1426	1437		N28 E90 7794		1-	P	1428	.25			
— SACP	01	1427	1435 D	1432	N29 E86 7794		1-	C	1432	.40			
— KANZ	01	1547	1617 D	1433	N28 E85 7794		1-	C		.86			26 CD
— SACP	01	1854	1907		N28 E85 7794		1-						
— LOCK	01	2001	2013	1858	N29 E80 7794		1-	C	2005	.47	1.00		19
— CULG	01	2208	2245	2005	N30 E90 7794		1-	C	2221	.20			10
— CULG	01	2335	2341	2221	N28 E85 7794			C	2337	.80			G
— CULG	01	2348	2400 D	2337	N29 E85 7794			P	2356	.40			G
— SACP	02	0008	0015	0010	N27 E76 7794		1-	C		.17	.46		19
— SACP	02	0044	0100	0049	N29 E80 7794			C	0049	.80			G
— MITK	02	0045	0100	0050	N28 E74 7794		1-	C		.69	1.71		23
— MANI	02	0045	0101	0051	N28 E78 7794		1-	V	0049	2.06		7.51	122 D
— CLMX	02	0048	0106 D	0051	N28 E80 7794		1-		0051	.45	1.08		
— CULG	02	0401	0422 D	0413	N26 E78 7794		1-	C	0056	.50	1.20		G
— KANZ	02	0517	0527	0520	N29 E80 7794			P	0413	.20			G
— MANI	02	0740 E	0805		N28 E80 7794	25 D	1-	C	0520	.60			
— MANI	02	0757	0812	0805	N28 E76 7794		1-	2	0805	.80	1.84		
— ONDR	02	1207 E	1241	1214	N28 E76 7794		1-	3	0845	.25			CEHJKR
— CAPE	02	1220 E	1246		N30 E64 7794	34 D	1+		1214			2.60	
— HUAN	02	1233 E	1240 D		N28 E68 7794	26 D	1-	P	1238	1.20			
— HUAN	02	1405	1410	1407	N27 E69 7794		1-	P	1233	.23			E
— HUAN	02	1743	1813	1800	N27 E71 7794		1-	C	1407	.10			D
— HUAN	02	1928	2058	1945	N27 E63 7794		1-	C	1800	.10			D
— HUAN	02	0248	0305	0254	N28 E65 7794		1-	C	1945	.20			DK
— CULG	03	0412	0416	0413	N28 E62 7794	17	1	C	0254	1.60	4.00		G
— CULG	03	0457	0505	0501	N28 E63 7794	4	1-	C	0413	1.60	4.00		G
— LOCK	05	0135	0220	NO FLARE	PATROL				0501	.80			
— LOCK	05	0330	0355	NO FLARE	PATROL								
— ARCE	06	2140	2210	2158	N30 E80 7801		1-	C	2158	.10	.30		20
— KANZ	07	0045	0112	0100	N30 E80 7801		1-	C	0100	.10	.30		20
— CLMX	07	0400	0445	NO FLARE	PATROL								
— CLMX	07	0842 E	0920 D		N34 W48 7799		1-	2	0910	.78	1.41		D
— CLMX	07	1400 E	1402		N36 E46 7799		1-						
— CLMX	07	1423 E	1602		N31 W49 7799		1-	C	1439	.50	.70		

# SOLAR FLARES

MAY 1965

OBSERVATORY	DATE	OBSERVED TIME		LOCATION		DURA- TION — MINUTES	IN- FOR- TANCE	OBS COND.	TIME U T	MEASUREMENTS			REMARKS	
		START	END	APPROX. LAT.	MER. DIST.	MC-MATH PLAGE REGION				MEAS. AREA Sq Deg	CORR AREA Sq Deg	MAX. WIDTH Ha		
— SACP	MAY 07 1965	1432	1510	N36 W49		7799	1-	C	1442	.60	.90	18	E	
— HUAN	07	1436	1454	N37 W48		7799	1-	C		.25	.53		D	
— KANZ	07	1444	1455	N36 W46		7799	1-	C	1516	.25	.53		D	
— HUAN	07	1511	1522	N36 W49		7799	1-	3 C	1602	.30	.60		DH	
— MCMA	07	1557	1658	N35 W52		7799	1-	C	1631	.50	.70			
— CLMX	07	1606	1644	N32 W54		7799	1-	C						
— MITK	08	0241	0321	N36 W58		7799	1-	C					D	
— MITK	08	0500	0512	N36 W60		7799	1-	C					D	
— MITK	08	0717	0738	N36 W59		7799	1-	C					E	
— MITK	08	0743	0800	N36 W60		7799	1-	C					D	
— ARCE	08	0817	0902	N34 W62		7799	1-	2	0838	.56	1.35			
— KANZ	08	0818	0850	N36 W60		7799	1-			.49	1.18		D	
— ARCE	08	1000		N34 W62		7799	1-	2	1000	.45			E	
— HUAN	08	1412	1516	N37 W62		7799	1-	2 C	1502	.80	2.40		EH	
— MCMA	08	1420	1510	N35 W67		7799	1-	C	1438	.87	1.66	20		
— SACP	08	1423	1507	N35 W63		7799	1-							
— KANZ	08	1450	1512	N36 W63		7799	1-			.50	1.50		EH	
— MCMA	08	1543	1548	N35 W68		7799	1-	2 C	1544	.50	1.50		EH	
— MCMA	08	1710	1723	N35 W69		7799	1-	1 P	1715	.20			E	
— HUAN	08	1720	1800	N35 W63		7799	1-	2 P	1735	.80	2.40		E	
— MCMA	08	1805	1830	N35 W69		7799	1-	2 P	1807	.25			E	
— HUAN	08	1806	1815	N36 W63		7799	1-	2 C	1811	.40	1.20		EH	
— MCMA	08	1906	1919	N37 W70		7799	1-	2 C	1911	.27			E	
— HUAN	08	1910	1934	N36 W63		7799	1-	P	1916	.34			E	
— HUAN	08	2011	2013	N36 W63		7799	1-	P	2011	.27			E	
— HUAN	08	2053	2055	N36 W63		7799	1-	P	2053	.20			E	
— MCMA	08	2054	2100	N37 W70		7799	1-	2 C	2055	.30	1.00		D	
— CULG	08	2352	2400	N06 E78		7802	1-	P	2355	.40			CG	
— CATA	09	1000	1110	N34 W78		7799	1-	2	1002	.14	.45	132	D	
— MCMA	09	1157	1214	N35 W88		7799	1-	2 C	1202	.20			D	
— MCMA	09	1259	1308	N35 W88		7799	1-	2 C	1302	.20			D	
— HUAN	09	1435	1455	N37 W80		7799	1-	C	1446	.13			DK	
— HUAN	09	1511	1531	N37 W80		7799	1-	C	1520	.25			D	
— SACP	09	1515	1531	N35 W76		7799	1-	C		.17	.48	18		
— MCMA	09	1518	1525	N35 W88		7799	1-	2 C	1521	.20			D	
— MCMA	09	1523	1550	N23 E86		7803	1-	2 C	1521	.30			D	
— MCMA	09	1612	1629	N23 E86		7803	1-	1 P	1612	.20			D	
— HUAN	09	1615	1629	N38 W85		7799	1-	C	1623	.20			DK	
— HUAN	09	1859	1931	N37 W90		7799	1-	C	1912	.38			D	
— MCMA	09	1900	1914	N35 W90		7799	1-	1 P	1911	.25			DK	
— HUAN	09	2016	2043	N38 W90		7799	1-	C	2027					
— CATA	10	0620	0930	N36 W90		7799	1	5	0818	.38	2.16	118	FG	
— ISTA	10	0740	0900	N46 W90		7799	1			.34	1.93			
— ARCE	10	0805	0850	N34 W90		7799	1-	2	0810	.20	1.14			
— ARCE	10	0930	0935	N34 W90		7799	1-	2	0930					
— KAND	10	1145	1218	N36 W90		7799	1+							
— KAND	10	1246	1252	N35 W90		7799	1-							

## SOLAR FLARES

MAY 1965

OBSERVATORY	DATE	OBSERVED TIME		LOCATION			DURA- TION — MINUTES	IM FOR TANCE	OBS COND	MEASUREMENTS				REMARKS		
		START	END	MAX PHASE	APPROX.					MC-MATH PLACE REGION	TIME U T	MEAS AREA Sq Deg	CORR AREA Sq Deg		MAX WIDTH Ha	MAX INT %
					LAT	MER DIST										
UCCL	MAY 11 1965	1548	1553		N22 E55	7803	1-	1-	3					D		
MITK	12	0459	0515	0502	N24 E46	7803	1-	1-	C					GH		
MITK	12	0633	0637	0635	N22 E41	7803	1-	1-	C					DGH		
ARCE	12	0828	E		N23 E42	7803	1-	1-					153	G		
CAPS	12	1301	1316		S15 W33	7805	1-	1-	3		.75	1.12				
CLMX	12	1314	1503		S07 W29	7805	1-	1-	3		.80	1.00				
KANZ	12	1320	E		S15 W40	7805	1-	1-			.60	.70		E		
MCMA	12	2044	2105	D	N22 E35	7803	1-	1-	2		.50	.70		EH		
HUAN	12	2045	2103	D	N21 E35	7803	1-	1-	P		.20	.27		EK		
HUAN	12	2125	E	2137	D	7803	1-	1-	P		.25	.33		EK		
SACP	12	2343	U	2355	N23 E32	7803	1-	1-	C		1.31	1.47	18			
KAND	14	0930	1007		N28 E90	7809	1-	1-	2		.50	.80		E		
OTTA	14	1037	E	1113	S15 W64	7805	1-	1-	3					EK		
UCCL	14	1039	E	1119	S13 W65	7805	1-	1-								
KAND	14	1040	E	1115	1047	7805	1+	1+								
CAPS	14	1046	E	1103	S10 W60	7805	1-	1-	2		.50	.90	157	DG		
KAND	14	1120	1126		N28 E90	7809	1-	1-								
KAND	14	1136	1146		N28 E90	7809	1-	1-								
CULG	15	0521	0527	0524	N25 E77	7809			C		.20					
CATA	15	0612	E	0612	N21 E02	7803	1-	1-	3		.60	.66	145	EH		
UCCL	15	0914	0927		N20 E85	7809	1-	1-	3					D		
UCCL	15	1008	1015		N20 E02	7803	1-	1-	3					E		
KANZ	15	1058	E	1105	D	7809	1-	1-						D		
UCCL	15	1100	1105	D	N20 E76	7809	1-	1-	3					D		
MCMA	15	1200	1207	1203	N20 E85	7809	1-	1-	2		.40			T		
SACP	15	1355	1402	1356	N25 E90	7809	1-	1-	C		.48	.48	18			
LOCK	15	1754	1815	1805	N21 W02	7803	1-	1-	C		.30	1.50	20	HJ		
LOCK	15	1900	1955	1917	N26 E90	7809	1	1	C		.60	3.00	20	HJ		
CLMX	16	0044	0122	D	N26 E90	7809										
LOCK	16	0122	D	0112	N21 E90	7812	1	1	C		.60	3.00				
LOCK	16	0103	0129	0111	N25 E90	7812	1	1	C		.60	3.00	20	HJ		
TACH	16	0326	E	0338	D	0330	12	1+	C				67	A		
CAPS	16	0600	E	0735	N26 E90	7812	95	2	2		2.00			HJK		
CATA	16	0630	E	1200	D	0900	330	D	2		1.62	9.21	178	J		
CAPE	16	0651	E	0737	N25 E90	7812	46	1+	2		1.10			J		
CAPE	16	0738	E	0942	N26 E90	7812	124	2	3		.90			HJK		
CAPS	16	0755	E	0930	D	7812	95	D	1		.60			A		
KANZ	16	0809	E	0820	N24 E89	7812	10	D	1		1.17	6.44		J		
ARCE	16	0810	E	0820	D	7812	74	1+	1		.60			J		
CAPE	16	0827	E	0941	D	0833	45	D	1		.69	3.92				
ARCE	16	0830	E	0915	D	7812	123	2	3		1.00			HJK		
CAPS	16	1042	1245		N26 E88	7812	1	1	C		.60			J		
CAPE	16	1055	E	1110	N25 E90	7812	53	1+	C		1.056		60			
KIEV	16	1127	1220	1130	N23 E90	7812	28	1	C		3.50			JK		
CAPE	16	1128	E	1156	N25 E90	7812	178	D	2		.80			FH		
MCMA	16	1217	E	1515	N26 E90	7812	28	D	1		1.00	4.50				
CLMX	16	1235	E	1403	N24 E90	7812	28	D	1		.90					



# SOLAR FLARES

MAY 1965

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION		DURATION — MINUTES	IM- POR- TANCE	OBS COND.	TIME — U T	MEASUREMENTS		REMARKS
		START	END	APPROX. LAT.	MATH. PLAGE REGION					MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	
—	MAY 1965											
—	16	1243	1301	N25 E90	7812		1-	C	1258	.20		DK
—	16	1255	1402	N26 E86	7812	67	1		1338	.80		EI
—	16	1314 E	1336 D	N23 E88	7812	22 D	2+	3			16.00	CH
—	16	1316 E	1342 D	N24 E88	7812	26 D	1+					DK
—	16	1329	1400	N25 E90	7812		1-	C	1358	.34		
—	16		1353									
—	16		1358									
—	16	1427	1506	N24 E90	7812		1-	P	1435	.20		DK
—	16	1443	1456	N24 E90	7812		1-	C	1448	.30	1.50	
—	16	1503	1520 D	N24 E90	7812		1-	C	1520	.40	2.00	
—	16	1513	1529	N24 E90	7812		1-	C	1518	.20		D
—	16	1515 E	1538	N26 E86	7812	23 D	1	2		.90		EHI
—	16	1910	1939	N24 E90	7812	29	1	C	1929	.80	4.00	D
—	16	1925 E	1933 D	N26 E88	7812		1-	2 P	1928	.20		D
—	16	1954 E	2000 D	N25 E88	7812		1-	2 P	2000	.10		D
—	16	1957	2006	N24 E90	7812		1-	C	2000	.25		D
—	16	2030	2045	N24 E90	7812		1-	C	2033	.40	2.00	
—	16	2032 E	2057 D	N25 E88	7812		1-	2 P	2032	.20		D
—	16	2034	2045 D	N24 E90	7812		1-	P	2037	.25		D
—	16	2037	2112	N24 E90	7812	35	1	C	2050	.70	3.50	J
—	16	2213	2337	N24 E90	7812	84	1	C	2227	.60	3.00	K
—	16	2214	2240 D	N25 E90	7812		1-	3 P	2228	.90		HJ
—	16		2228									
—	16	2215	2340	N24 E90	7812	85	1	C	2225	.70	3.50	HJ
—	16	2303	2338	N24 E90	7812	35	1	C	2314	.90	4.50	HJ
—	16	2307	2339	N23 E90	7812		1-	P	2310	.40	2.00	B
—	16	2312 E	2315	N25 E85	7812	4 D	2					
—	16	2342	2350 D	N23 E85	7812		1-	C	2350	.40	1.10	
—	17	0007 E	0025 D	N24 E90	7812	18 D	1	C	0019	.90	4.50	H
—	17	0009	0028 D	N24 E90	7812	19 D	1	2 P	0018	1.00		
—	17	0030	0119	N24 E90	7812	49	1	C	0102	1.00	5.00	20
—	17		0102									
—	17	0031 E	0045 D	N24 E90	7812	14 D	1	C	0036	.90	4.50	H
—	17	0032 E	0058	N24 E90	7812	26 D	1	1 P	0035	1.70		
—	17	0043 E	0053	N26 E88	7812	10 D	1+	C				
—	17	0059	0105 D	N24 E90	7812	6 D	1	2 P	0104	1.70		E
—	17	0103 E	0117	N24 E88	7812	14 D	1	V	0108	1.54		E
—	17	0124	0143	N26 E85	7812	19	1	V	0131	1.54		E
—	17	0135	0200 D	N25 E80	7812	25 D	1	V				AD
—	17	0152	0210	N26 E85	7812	18	1	V	0152	1.23		AD
—	17	0226	0240	N24 E88	7812		1-	V	0229	.26		E
—	17	0240	0321	N26 E85	7812	41	1	V	0250	1.23		D
—	17	0244 E	0302	N25 E87	7812	138	1	V	0257	2.70		ADK
—	17	0252	0257	N24 E79	7812	5	1	2	0257	1.83	19.20	CDH
—	17	0252 E	0313 D	N25 E80	7812	21 D	1	V			2.43	E
—	17	0324	0422	N26 E85	7812	58	1	V	0350	2.01		CD
—	17	0337	0347	N24 E78	7812	10	1	2	0340	1.83		
—	17	0340 E	0402 D	N25 E80	7812	22 D	1	C		1.30	2.43	
—	17	0343 E	0348	N25 E80	7812	5 D	1+	V			4.36	AD

## SOLAR FLARES

MAY 1965

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			IM- POR- TANCE	OBS. COND.	TIME U T	MEASUREMENTS			REMARKS
		START	END	APPROX.	LAT.	MEM. DIST.				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H <sub>g</sub>	
MITK	17	0405	0418		N26	E50	7809						D
MITK	17	0433	0452		N26	E85	7812						
MITK	17	0518	0545		N26	E82	7812						
MITK	17	0603	0619		N26	E82	7812						
CATA	17	0630	0650		S25	E47	7810						
TACH	17	0631	0651		S26	E49	7810		0636	.38	.60		E
ONDR	17	0637	0648		S22	E48	7810		0631	.40	.60	1.80	E
CATA	17	0635	0655		N24	E80	7812		0638			1.30	CEG
MITK	17	0636	0648		N26	E83	7812		0646	.28	.90		D
MITK	17	0653	0713		N26	E76	7812						D
KANZ	17	0755	0820		N23	E80	7812						D
CAPE	17	0803	0824		N26	E80	7812		0810	.90			J
ARCE	17	0810	0828	D	N26	E79	7812		0810	1.31	4.19		
KAND	17	0923	1000		N26	E75	7812						
KAND	17	0948	0957		N27	E90	7812						
CAPS	17	1001	1008		N25	E80	7812		1005	.20			D
KAND	17	1002	1039		N26	E75	7812						
KAND	17	1045	1155		N26	E75	7812						
KAND	17	1049	1052	D	N23	E80	7812						D
KAND	17	1105	1110		N24	E68	7809						
KAND	17	1112	1119		N28	E90	7812						
CAPE	17	1116	1131		N26	E78	7812		1121	.90			J
KAND	17	1200	1215		N26	E75	7812						
KAND	17	1216	1228		N26	E75	7812						
SACP	17	1302	1313		N26	E81	7812						
HUAN	17	1323	1334		N23	E73	7812		1327	.26			E
HUAN	17	1344	1349		N23	E72	7812		1345	.25			D
HUAN	17	1354	1359		N23	E72	7812		1356	.20			D
CAPS	17	1406	1418	D	N23	E72	7812		1414	.20			D
CAPS	17	1430	1452	D	N26	E50	7809		1441	1.40	2.40		CE
HUAN	17	1431	1440		N25	E48	7809		1436	.30	.50		E
CLMX	17	1432	1445		N31	E44	7809		1436	.90	1.00		
CLMX	17	1435	1440		N25	E70	7812		1438	.50	1.00		
SACP	17	1435	1443		N25	E69	7812		1438	.43	.87		
HUAN	17	1436	1442		N22	E70	7812		1438	.20			D
CAPS	17	1441	1458	D	N25	E78	7812		1449	1.10	3.20		D
HUAN	17	1445	1451		N23	E69	7812		1449	.20			CE
SACP	17	1445	1452		N25	E68	7812		1448	.34	.68		E
CLMX	17	1445	1452		N25	E70	7812		1448	.90	1.80		
CLMX	17	1558	1601		N19	E47	7809		1559	.40	.50		
CLMX	17	1802	1811		N25	E72	7812		1806	.40	.80		
SACP	17	1858	1903		N21	E43	7809		1901	.61	.74		23
HALE	17	1859	1903		N21	E43	7809		1901	1.00	1.20		H
LOCK	17	1859	1907		N21	E40	7809		1902	.50	.50		JL
HUAN	17	1901	1903		N22	E45	7809		1902	.20	.30		D
HUAN	17	1901	1905	D	N26	E76	7812		1902	.20			D
HALE	17	2027	2036		N23	E62	7812		2032	.40	.40		
CLMX	17	2137	2154		N25	E69	7812		2136	.70	1.30		
SACP	17	2321	2333		N20	W19	7813			.17	.17		
MITK	17	2348	0006		N27	E65	7812						D
MITK	18	0159	0213		N23	E42	7809						D

COMMERCE - STANDARDS - BOLLER

## SOLAR FLARES

MAY 1965

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION		DURATION — MINUTES	IM POR TANCE	OBS COND	MEASUREMENTS			REMARKS		
		START	END	LAT.	APPROX MATH PLAGE REGION				TIME — U T	MEAS AREA Sq. Deg.	CORR AREA Sq. Deg.		MAX WIDTH Ho	MAX INT "
MITK	MAY 18 1955	0314	0340	N25 E66	7812		1-	C	0326	.50	.95		D	
MANI	18	0322 E	0340	N24 E69	7812	31	1-	2 C					E	
MITK	18	0459	0530	N26 E41	7809	42 D	1+	V	0508	3.60	5.40	1.18	90	EH
IKOM	18	0505 E	0547 D	N22 E37	7809		1-	C					D	
MITK	18	0539	0558	N27 E38	7809		1-	C					E	
MITK	18	0546	0612	N25 E65	7812	26	1-	C						
MANI	18	0625	0658	N25 E68	7812	33	1-	2 C	0635	1.00	1.90			
MITK	18	0627	0700	N26 E65	7812	22 D	1+	C						
WEND	18	0630 E	0652 D	N23 E62	7812	16 D	1-	3	0643	.80	6.00		182	CEH
CAPS	18	0637 E	0653	N25 E64	7812		1-	3	0645	.16	2.10		155	DH
CATA	18	0638	0650	N24 E65	7812		1-	3	0645	.80	2.20			
ATHN	18	0641 E	0650	N27 E65	7812	9	1-	3	0645	.16				
CAPE	18	0641 E	0653 D	N25 E66	7812	12 D	1	C	0646	1.10				
IKOM	18	0643 E	0652 D	N23 E64	7812	9 D	1-	V			1.60		90	D
BUCA	18	0648 E	0700 D	N26 E64	7812		1-							
KAND	18	0821	0836	N21 W45	7803		1-							
KAND	18	0822	0834	N18 W23	7813		1-	3	0854	.50	1.08		166	E
CATA	18	0824	0858 D	N25 E63	7812		1+				1.60			
KAND	18	0826	0850	N27 E64	7812	24	1-							
BUCA	18	0832 E	0850 D	N26 E64	7812		1-							
KANZ	18	0836	0926	N28 E67	7812		1-							
KANZ	18	0848 E	0902 D	N26 E61	7812		1-							
CAPS	18	0902	0926	N27 E60	7812		1-	3	0905	.50	1.20		240	DG
CAPS	18	0837	0907	N20 W23	7813		1-	3	0841	.30	.30		174	D
CATA	18	0838	0858	N20 W23	7813		1-	3	0843	.46	.55			
KAND	18	0838	0904	N18 W23	7813	26	1+							
BUCA	18	0839 E	0848 D	N20 W20	7813		1-	3	0841	.30	1.80		CD	
HERS	18	0840 E	0850 D	N20 W20	7813		1-							
KANZ	18	0840	0905 D	N20 W22	7813	25 D	1-		0841	.40	.80			
BUCA	18	0836 E	0850 D	N21 W40	7803		1-	3	0843	.44	.65		178	E
CATA	18	0840	0849 D	N22 W40	7803		1-							
KANZ	18	0842	0951	N21 W41	7803	18	1-							
KAND	18	0843	0901	N21 W45	7803		1-	3	0845	.50	.70		DJ	
CAPS	18	0843	0907	N23 W41	7803		1-	3	0955	.20	.20		DGJ	
CAPS	18	0943	1030 D	N20 W23	7813		1-	3	1004	.90	1.40		EJ	
CAPS	18	0959	1019 D	N22 W41	7803		1-	3 C	1226	.30	.40		EH	
MCMA	18	1222	1245 D	N22 E30	7809		1-	3	1233	.90	1.20		234	EJ
CAPS	18	1224 E	1236	N22 E32	7809		1-	3 C	1236	.30	.70		D	
MCMA	18	1234	1238	N27 E65	7812		1-	C						
KANZ	18	1415 E	1455	N19 E31	7809		1-		1450	.20			E	
HUAN	18	1445	1457	N23 E58	7812		1-							
KANZ	18	1447	1503	N25 W60	7803		1-							
KANZ	18	1526	1550	N19 E29	7809	24	1-							
KANZ	18	1542	1659	N25 W57	7803		1-							
SACP	18	1625	1645	N21 E28	7809		1-	C	1628	.61	.65		19	E
HUAN	18	1626 E	1630 D	N20 E28	7809		1-	P	1630	.25	.31		EH	
MCMA	18	1627	1645	N22 E28	7809		1-	2 C	1630	.30	.40		D	
MCMA	18	1721	1730	N27 E63	7812		1-	2 C	1724	.20	.40		18	
SACP	18	1737	1748 D	N19 E11	7809		1-	P		.26	.26			
MCMA	18	1748	1755	N27 E63	7812		1-	2 C	1750	.30	.70		E	
MCMA	18	1828	1835	N22 E27	7809		1-	2 C	1829	.30	.40		E	

# SOLAR FLARES

MAY 1965

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	TIME — U T	MEASUREMENTS		MAX. WIDTH H <sub>g</sub>	MAX. INT °	REMARKS
		START	END	APPROX. LAT.	APPROX. MER DIST	MEMATH PLACE REGION					MEAS. AREA Sq Deg	CORR. AREA Sq Deg			
MCMA	MAY 1965	18 1844	1915	N22	E27	7809		1-	2	1856	.60	.70		20	EK
LOCK		18 1849	1902	N19	E24	7809		1-	C	1855	.60	.60		19	L
SACP		18 1850	1917	N20	E27	7809		1-	P		1.75	1.86			
HALE		18 1852	1901	N18	E26	7809		1-	1	1857	.60	.60			
LOCK		18 1854	1911	N18	E28	7809		1-	C	1902	.50	.50		10	
HUAN		18 1915	1923	N20	E28	7809		1-	C	1920	.20	.25			
MCMA		18 2000	2015	N25	E29	7809		1-	1	2003	.20	.30			D
MCMA		18 2107	2120	N25	E29	7809		1-	2	2109	.20	.30			D
SACP		18 2326	2351	N19	W32	7813		1-	P		.43	.47		19	
MANI		18 2334	2355	N20	W34	7813		1-	2	2348	.17	.19			
CAPE		19 0727	0747	N27	E51	7812		1-	C	0733	1.10	1.90			E
MANI		19 0731	0740	N24	E53	7812		1-	2	0733	.17	.24			
BUCA		19 0731	0742	N26	E50	7812		1-			1.00	1.43		182	E
CATA		19 0735	0755	N24	E50	7812		1-	2	0736	.82				D
UCCL		19 0931	0938	N21	E48	7812		1-	3						E
BUCA		19 1024	1043	N24	E50	7812		1-	3			.70			E
BUCA		19 1036	1044	N24	E24	7809		1-	1						E
UCCL		19 1043	1047	N22	W37	7813		1-	2	1129	.20	.20			E
MCMA		19 1128	1133	N21	E17	7809		1-	2	1141	.20	.20			D
MCMA		19 1140	1149	N23	E17	7809		1-	C		.36	.37		18	E
SACP		19 1220	1237	N20	E18	7809		1-	C	1222	.20	.20			S
MCMA		19 1222	1229	N21	E17	7809		1-	2	1323	.30	.40			S
MCMA		19 1319	1335	N19	W42	7813		1-	2						E
UCCL		19 1405	1409	N23	E45	7812		1-	3		1.09	1.17		20	E
SACP		19 1423	1455	N26	E22	7809		1-	C	1426	.65	.78			E
HUAN		19 1424	1443	N25	E22	7809		1-	P	1430	1.20	1.50		165	CF
CAPS		19 1424	1446	N24	E25	7809		1-	3						EH
UCCL		19 1424	1448	N25	E24	7809	24	1-	3	1427	.50	.60			S
MCMA		19 1424	1451	N27	E23	7809		1-	2						D
UCCL		19 1508	1513	N24	E48	7812		1-	3		.56	.74		20	E
SACP		19 1508	1521	N26	E46	7812		1-	C	1512	.30	.50			EH
HUAN		19 1509	1514	N24	E46	7812		1-	C	1511	.50	.70			S
MCMA		19 1509	1516	N27	E47	7812		1-	2	1537	.40	.60		190	D
CAPS		19 1530	1552	N20	W41	7813		1-	3	1534	.30	.40			S
MCMA		19 1532	1542	N19	W44	7813		1-	1	1602	.40	.50			S
MCMA		19 1600	1612	N27	E23	7809		1-	2	1602	.61	.65		18	E
SACP		19 1600	1619	N26	E22	7809		1-	C						D
UCCL		19 1602	1614	N25	E24	7809		1-	3		.26	.26		18	E
UCCL		19 1621	1640	N22	W45	7813		1-	3	1803	1.60	1.90			D
SACP		19 1723	1733	N20	E15	7809		1-	C	1827	2.00	2.60			F
HALE		19 1801	1820	N17	W42	7813	42	1-	3	1827	.40	.50			
HALE		19 1820	1902	N24	E43	7812		1-	3	1826	.80	.80		20	H
CLMX		19 1821	1840	N23	E47	7812		1-	C	1826	1.30	2.10			S
LOCK		19 1821	1845	N25	E41	7812	29	1-	2	1832	1.35	2.24			E
MCMA		19 1821	1850	N27	E45	7812	D	1-	C	1832	1.40	1.76		21	
HUAN		19 1821	1904	N23	E46	7812	43	1-	C	1852	.60	.80			
SACP		19 1821	1908	N25	E44	7812		1-	3	1923	.50	.70			SHK
HALE		19 1848	1856	N27	E42	7812		1-	2	1924	1.00	1.20			
MCMA		19 1902	1957	N18	W42	7813		1-	3						
HALE		19 1918	1952	N17	W41	7813		1-	C						

# SOLAR FLARES

MAY 1965

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA TION — MINUTES	IM- POR TANCE	OBS COND	MEASUREMENTS				REMARKS
		START	END	APPROX. LAT.	LOCATION					TIME U T	MEAS AREA Sq Deg	CORR AREA Sq Deg	MAX WIDTH H <sub>o</sub>	
					MER DIST	MCNATH PLACE REGION								
HALE	19 1948	2010	1953	N20 E12	7809		1-	3 C	1953	.40	.40		D	
MCMA	19 1951	2002	1953	N20 E20	7809		1-	2 C	1953	.20	.20		18	
SACP	19 1951	2009	1956	N20 E13	7809		1-	C		.43	.44		20	
LOCK	19 1952	2007	2002	N21 E13	7809		1-	C	2002	.30	.30		E	
OTTA	19 2002	E	2009	N20 E12	7809		1-	C	2002	.36	.36		H	
HALE	19 2007	2020	2009	N22 E12	7809		1-	2 C	2009	.40	.40		HE	
OTTA	19 2105	2124 D		N20 E13	7809		1-	1 C	2115	.53	.53		18	
SACP	19 2106	2132	2114	N20 E13	7809		1-	C		.61	.62		E	
MCMA	19 2108	2120	2115	N20 E20	7809		1-	2 C	2115	.50	.50			
HALE	19 2109	2125	2115	N20 E13	7809		1-	3 C	2115	1.20	1.20			
HALE	20 0001	0009	0006	N18 W44	7813	8	1	2 C	0006	2.00	2.40		E	
MITK	20 0001	E	0012 D	N18 W45	7813		1-	C		.70	.80			
CLMX	20 0001	0013 D		N18 W43	7813	21	1	C	0012	2.50	3.00			
HALE	20 0009	0030	0014	N18 W45	7813		1-	3 C	0014	1.30	1.56			
MANI	20 0005	E	0040	N21 W34			1-	2	0006	.80	.80			
HALE	20 0138	E	0150 D	N24 E16	7809		1-	3 P	0139	3.60	3.60			
BUCA	20 0556	E	0639 D	N19 W48	7813	43 D	1	2	0603	1.00	1.30			
MANI	20 0600	E	0626	N21 W46	7813		1-	2	0622	1.60	2.50		194	
CAPS	20 0615	E	0636 D	N21 W48	7813	21 D	1	2	0622	1.60	2.50		73	
ABST	20 0621	E	0639 D	N20 W45	7813	18 D	1	C	0626	2.20	1.60		DJL	
BUCA	20 0652	E	0701 D	N19 W49	7813		1-			.90	.90		J	
WROC	20 0832	E	0840 D	N22 E09	7809		1-	1					J	
WROC	20 0838	E	0840 D	N26 E32	7812		1-	1					J	
KAND	20 0853		0857	N23 E10	7809		1-						HK	
OTTA	20 1051	1107	1055	N17 W50	7813		1-	1 C	1055	.15	.20			
OTTA	20 1206	1425	1215	N26 E35	7812		1-	C	1215	.24	.28			
KAND	20 1210	1227	1212	N24 E24	7812	17	1							
KAND	20 1236	1255		N24 E24	7812		1-							
HUAN	20 1241	1300	1248	N24 E36	7812		1-	C	1248	.30	.41		D	
CLMX	20 1247	E	1257 D	N24 E36	7812		1-	C	1249	.50	.55			
SACP	20 1314	1339	1326	N25 E35	7812		1-	C		.26	.30		19	
HUAN	20 1321	1335	1325	N24 E36	7812		1-	C	1325	.20	.27		D	
MCMA	20 1405	1413	1406	N26 E09	7809		1-	C	1406	.20	.20		E	
SACP	20 1405	1418 D	1406	N25 E09	7809		1-	C		.65	.66		18	
OTTA	20 1405	1421	1406	N25 E09	7809		1-	2 C	1406	.28	.28		F	
OTTA	20 1440	1457	1447	N24 W49	7819		1-	2 C	1417	.12	.16			
UCCL	20 1440	1501	1446	N25 E32	7812		1-						E	
OTTA	20 1441	1452	1445	N27 E30	7812	17	1	3						
SACP	20 1441	1452	1445	N27 E30	7812	21	1	C	1446	1.90	2.17			
MCMA	20 1441	1455	1444	N28 E32	7812		1-	C		.99	1.13		22	
HUAN	20 1441	1456	1445	N26 E30	7812		1-	2 C	1444	.80	1.10		S	
OTTA	20 1502	1516	1445	N27 E33	7812		1-	C	1445	.50	.67		E	
OTTA	20 1535	1553	1508	N27 E33	7812		1-	C	1508	.12	.16			
OTTA	20 1548	1557	1537	N27 E33	7812		1-	C	1537	.12	.13			
OTTA	20 1548	1557	1550	N28 E09	7809		1-	C	1550	.24	.25			
OTTA	20 1602	1643	1604	N27 E32	7812		1-	C	1604	.20	.23			
HUAN	20 1603	1609	1605	N25 E35	7812		1-	C	1605	.20	.27		D	
OTTA	20 1647	1733	1649	N22 E02	7809		1-	C	1649	.04	.04			
MCMA	20 1700	1711	1705	N27 E35	7812		1-	1 C	1705	.20	.30		D	
OTTA	20 1702	1712	1706	N27 E32	7812		1-	2 C	1706	.18	.20			
HUAN	20 1702	1712	1705	N25 E35	7812		1-	C	1705	.20	.27		D	



# SOLAR FLARES

MAY 1965

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURATION MINUTES	IM FOR TANCE	OBS COND	TIME U T	MEASUREMENTS		MAX WIDTH Ha	MAX INT	REMARKS
		START	END	APPROX LAT	M. MATH PLACE REGION	MER DIST					MEAS AREA Sq Deg	CORR AREA Sq Deg			
HUAN	20	1748	1801	N25 E35	7812			1-	C	1754	.20	.27		20	D
LOCK	20	1909	1918	N22 E00	7809			1-	C	1912	.20	.20			
HALE	20	1909	1921	N23 W01	7809			1-	1 P	1911	.40	.40			D
MCMA	20	1910	1916	N23 E00	7809			1-	2 C	1911	.10	.10			
SACP	20	1910	1917	N22 E00	7809			1-	C	1911	.17	.17		19	
CLMX	20	2028	2100	N18 W50	7813			1-	C	2047	.70	.90			
SACP	20	2033	2100	N19 W55	7813			1-	C	2047	.30	.43		17	
CLMX	20	2040	2053	N21 E03	7809			1-	C	2043	.70	.70			
MCMA	20	2040	2057	N23 E03	7809			1-	2 C	2042	.20	.20			D
CLMX	20	2125	2130	N27 E30	7812			1-	C	2126	.20	.20			
MCMA	20	2125	2130	N27 E33	7812			1-	2 C	2127	.20	.30			D
MCMA	20	2215	2228	N23 E03	7809			1-	3 C	2218	.60	.70			S
MCMA	20	2229	2247	N19 W60	7813			1-	3 C	2231	.20	.40		18	D
SACP	20	2241	2258	N26 E03	7809			1-	C	2247	.41	.42			
CLMX	20	2245	2255	N26 E04	7809			1-	C	2247	.70	.70			S
MCMA	20	2245	2256	N25 E05	7809			1-	2 C	2247	.50	.60			
CLMX	20	2320	0003	N21 W58	7813		43	1	C	2324	1.50	2.10		21	
SACP	20	2320	0003	N19 W59	7813		37	D	C	2324	1.62	2.47			
MITK	20	2321	2326	N18 W60	7813		5	D	C	2334	.40	.40			E
CLMX	20	2329	0002	N12 E03	7809			1-	C	2331	.40	.44			
CLMX	20	2330	2340	N26 E31	7812			1-	C	2331	.52	.59		18	
SACP	20	2330	2340	N27 E30	7812			1-	2	2335	.33	.33			
MANI	20	2333	2355	N25 E04	7809			1-	2		1.00	1.40			
MANI	20	2338	0040	N20 W59	7813			1-							
CLMX	21	0009	0048	N21 W58	7813			1-	C	0029	.70	1.10		19	D
SACP	21	0011	0045	N18 W59	7813			1-	C		1.05	1.59			
IKOM	21	0045	0055	N20 W58	7813			1-	V						
CLMX	21	0100	0109	N04 E40				1-	C	0103	.50	.55			
SACP	21	0100	0110	N05 E39				1-	C		.52	.58		18	
MANI	21	0105	0120	N20 W58	7813			1-	2	0112	.33	.46			
CLMX	21	0114	0123	N21 E04	7809			1-	C	0119	.50	.50			J
WROC	21	0736	0840	N19 W63	7813		64	D	2				2.60		
KAND	21	0807	0952	N19 W64	7813		105	D	2						
ATHN	21	0755	0800	N07 E32				1-	2	0756	.20	.30			H
WROC	21	0930	0935	N25 E22	7812			1-	2						J
WROC	21	0930	0935	N23 W02	7809		5	D	2						S
MCMA	21	1106	1149	N24 W06	7809			1-	3 C	1137	1.10	1.20			J
WROC	21	1113	1123	N23 W02	7809		10	D	2						J
OTTA	21	1124	1147	N23 W05	7809			1-	C	1137	1.43	1.44			F
CAPE	21	1128	1144	N23 W05	7809			1-	C	1134	1.10	1.20			J
UCCL	21	1130	1149	N23 W03	7809			1-	3						E
OTTA	21	1108	1214	N22 E17	7812			1-	C	1124	.09	.09			H
OTTA	21	1146	1156	N25 F18	7812			1-	C	1148	.18	.19			E
OTTA	21	1156	1251	N25 W05	7809			1-	C	1221	.60	.61			F
OTTA	21	1213	1235	N08 W32	7816			1-	C	1214	.23	.24			F
OTTA	21	1358	1403	N19 W65	7813			1-	2 C	1359	.18	.31			
OTTA	21	1441	1541	N26 E20	7812			1-	1 C	1450	.12	.13			
MCMA	21	1442	1454	N25 E22	7812			1-	2 C	1444	.10	.10			D
HUAN	21	1444	1509	N21 W66	7813			1-	C	1449	.40	.40			EK
MCMA	21	1457	1502	N18 W68	7813			1-	2 C	1458	.20	.60			D

## SOLAR FLARES

MAY 1965

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				REMARKS	
		START	END	APPROX	LAT	MER DIST				MEAS AREA Sq. Deg.	CORR AREA Sq. Deg.	MAX WIDTH H <sub>g</sub>	MAX INT °		
OTTA	21	1457	1505	N17 W67	7813	1458	1-1	1 C	1458	.27	.50			20	
SACP	21	1458	1503	N18 W65	7813	1459	1-1	C	1531	.61	1.06				
OTTA	21	1526	1535	N26 E10	7812	1531	1-1	C	1531	.12	.12				
CLMX	21	1527 E	1543	N25 E21	7812	1531	1-1	C	1531	.40	.44				
MCMA	21	1531	1536	N25 E12	7812	1533	1-1	2 C	1533	.20	.20				D
MCMA	21	1526	1540	N20 W66	7813	1530	1-1	2 C	1530	.20	.60				D
CLMX	21	1527 E	1540	N20 W65	7813	1531	1-1	C	1531	.50	.85				
HUAN	21	1528	1536	N21 W65	7813	1531	1-1	C	1531	.20					D
OTTA	21	1529	1536	N19 W65	7813	1531	1-1	2 C	1531	.18	.31				
CLMX	21	1554	1606	N26 W08	7809	1558	1-1	C	1558	.50	.50				
OTTA	21	1554	1607	N23 W08	7809	1557	1-1	2 C	1557	.42	.43				
HUAN	21	1714	1730 D	N18 W68	7813	1726	1-1	P	1726	.20					D
OTTA	21	1722 E	1736	N18 W68	7813	1722	1-1	2 C	1722	.60	1.06				F
OTTA	21	1814	1835 D	N18 W69	7813	1825	1-1	3 C	1825	.36	.67				E
MCMA	21	1849	1905	N25 W08	7809	1855	1-1	2 C	1855	.40	.40				S
HALE	21	1849	1906	N24 W10	7809	1856	1-1	2 C	1856	.70	.70				
HALE	21	1852	1908	N18 W70	7813	1900	1-1	2 C	1900	.70	1.40				
OTTA	21	2026 E	2029 D	N24 W10	7809	2027	1-1	2 C	2027	.18	.18				
MCMA	21	2040	2051	N18 W70	7813	2042	1-1	3 C	2042	.20	.60				D
HALE	21	2047 E	2059	N17 W72	7813	2047	1-1	3 P	2047	.70	1.50				
MCMA	21	2120	2158	N21 W10	7809	2125	1-1	3 C	2125	.20	.20				D
HALE	21	2126	2129	N23 W11	7809	2127	1-1	2 C	2127	.40	.40				
HALE	21	2128	2155	N17 W71	7813	2136	1-1	2 C	2136	.60	1.20				
HALE	21	2244 E	2319	N18 W74	7813	2252	1-1	2 P	2252	.60	1.40				
HALE	21	2342	2347	N23 W11	7809	2343	1-1	3 C	2343	.10	.10				
HALE	21	2347	0025	N23 W09	7809	0002	1-1	3 C	0002	.50	.50				
SACP	22	0000	0017	N24 W10	7809	0005	1-1	C		.52	.53			19	
MANI	22	0002 E	0010	N28 W06	7809	0003	1-1	1 V	0004	.25	.25				
MITK	22	0003 E	0016	N23 W10	7809	0003	1-1	3 V	0003	.82	.93	1.85		120	D
HALE	22	0052	0104	N17 W75	7813	0054	1-1	3 C	0054	.40	1.00				
SACP	22	0053	0101	N16 W72	7813	0054	1-1	3 C		.35	.72			18	
SACP	22	0115 E	0121 D	N19 W70	7813	0120	1-1	P		.30	.60			19	
HALE	22	0117	0147	N18 W74	7813	0123	1-1	2 C	0123	.40	1.00				
HALE	22	0151	0204	N18 W75	7813	0153	1-1	3 C	0153	1.00	2.40				
HALE	22	0205	0222	N18 W75	7813	0208	1-1	3 C	0208	.30	.70				
HALE	22	0232	0237	N18 W73	7813	0234	1-1	3 C	0234	.20	.50				F
HALE	22	0250	0259	N18 W75	7813	0253	1-1	3 C	0253	.30	.70				
HALE	22	0354	0400	N18 W80	7813	0356	1-1	1 C	0356	.20	.50				
WROC	22	0655 E	0720 D	N18 W70	7813	0733	1-1	1				2.80			J
ONDR	22	0727	0748	N24 E10	7812		1-1	3	0730		1.70				CEH HFJ
WROC	22	0744 E	0814 D	N27 E12	7812		1-1	1							
WROC	22	0802 E	0815	N20 W73	7813		1-1	2	0807	.40	1.80			80	D
ATHN	22	0804	0815	N19 W76	7813		1-1	V		.58	1.01			174	DH
IKOM	22	0805	0815	N20 W76	7813		1-1	3	0810			2.80			JL
CATA	22	0805	0830	N21 W79	7813		1-1	1							EK
WROC	22	0928 E		N18 W70	7813		1-1	3							
UCCL	22	1106	1208	N20 W85	7813		1-1								
WROC	22	1124 E	1136 D	N20 W75	7813		1-1	C		.35	.90			20	
SACP	22	1309	1327	N18 W78	7813	1317	1-1	C	1326	.70	1.70				
CLMX	22	1309	1331	N19 W80	7813	1326	1-1	C							

COMMENCE - STALLAGE - BOULDER

# SOLAR FLARES

MAY 1965

OBSERVATORY	DATE	OBSERVE		LOCATION		DURA TION — MINUTES	IM POR TANCE	OBS COND	TIME U.T.	MEASUREMENTS			MAX INT	REMARKS
		START	END	APPROX	PLAGE REGION					AREA Sq. Deg.	CORR AREA Sq. Deg.	MAX WIDTH H <sub>α</sub>		
	MAY 1965													
HUAN	22	1311	1337	N19 W85	7813		1-	P	1321	.30				D 30
MCMA	22	1313	1329	N18 W85	7813		1-	3 C	1317	.50				CJ
CAPS	22	1313	1334	N17 W79	7813		1-	3	1321	.25	.80		160	E
HUAN	22	1425	1437	N19 W85	7813		1-	P	1434	.30				
CLMX	22	1512	1551	N19 W80	7813		1-	C	1532	.50	1.20			
CLMX	22	1611	1637	N19 W86	7813		1-	C	1627	.70	1.90			
HUAN	22	1633	1640	N19 W85	7813		1-	P	1635	.25				D
CLMX	22	1633	1651	N22 W00	7812		1-	C	1642	.50	.50			
SACP	22	1633	1704	N23 W01	7812		1-	C		.41	.61		19	
OTTA	22	1634	1702	N23 W00	7812		1-	2 C	1644	.18	.18			H
OTTA	22	1654	1703	N23 W22	7809		1-	C	1658	.12	.13			H
OTTA	22	1739	1817	N24 W22	7809		1-	C	1753	.15	.16			D
MCMA	22	1752	1800	N25 W20	7809		1-	2 C	1755	.10	.10			
HALE	22	1916	1940	N17 W90	7813		1-	1 C	1929	.60				
CLMX	22	1922	1940	N19 W90	7813		1-	C	1929	.40	2.00			
MCMA	22	1925	1953	N18 W88	7813		1-	2 C	1929	.50				
CLMX	22	1930	1943	N26 E18	7812		1-	C	1943	1.20	1.30			
MCMA	22	1938	2008	N26 W20	7809	30 D	1-	2 C	1944	1.70	2.10			S
SACP	22	1940	1953	N25 W19	7809	13 D	1-	2 C	1950	2.72	2.88			
HALE	22	1942	2009	N25 W20	7809	27	1-	3 P	1947	2.20	2.20		22	F
HUAN	22	1943	1957	N27 W20	7809		1-	C	1947	1.00	1.22			E
HALE	22	1942	2016	N17 W90	7813		1-	2 P	2002	.70				
HUAN	22	1959	2009	N19 W90	7813		1-	C	2002	.50				E
MCMA	22	2000	2007	N18 W90	7813		1-	2 C	2002	.30				
HALE	22	2054	2127	N17 W90	7813		1-	1 C	2111	.60				
HALE	22	2147	2200	N17 W90	7813		1-	1 C	2154	.40				
MCMA	22	2244	2249	N18 W90	7813		1-	1 P	2246	.20				
	22	2305	2310	NO FLARE										
CULG	22	2313	2320	N07 W54	7816		1-	P	2317	.40	.68			G
HALE	22	2326	2331	N17 W90	7813		1-	2 C	2328	.30				
CLMX	22	2326	2358	N19 W90	7813		1-	C	2328	.40	2.00			
HALE	22	2337	0002	N17 W90	7813		1-	2 C	2344	.40				
CLMX	22	2337	2350	N24 W02	7812		1-	C	2343	.60	.60			
	23	0040	0045	NO FLARE										
HALE	23	0159	0207	N17 W90	7813		1-	2 C	0202	.30				
HALE	23	0223	0244	N24 W24	7809		1-	2 C	0226	.20	.20			
HALE	23	0223	0328	N24 W22	7809		1-	2 C	0233	.30	.30			
CULG	23	0236	0313	N22 W29	7809		1-	C	0248	.60	.75			
HALE	23	0314	0325	N18 W90	7813		1-	3 C	0322	.10				H
HALE	23	0351	0355	N17 W90	7813		1-	3 C	0352	.10				
CULG	23	0530	0610	N05 E25	7813		1-	C	0553	.40	.44			GL
CULG	23	0542	0552	N24 W07	7812	10	1-	C	0545	2.00	2.20			H
CATA	23	0625	0645	N21 W90	7813		1-	1	0636	.14	.80		132	D
OTTA	23	1248	1353	N22 W10	7812		1-	1 C	1307	.18	.18			H
OTTA	23	1550	1617	N22 W12	7812		1-	1 C	1552	1.64	1.68			E
CAPS	23	1556	1606	N27 E00	7812		1-	3	1600	1.00	1.10			H
OTTA	23	1600	1623	N21 W15	7812		1-	C	1603	.21	.21			
OTTA	23	1620	1625	N22 W15	7812		1-	P	1618	.26	.26		18	
SACP	23	1707	1720	N17 W90	7813		1-	3 P	1714	.20				
HALE	23													

# SOLAR FLARES

MAY 1965

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS COND.	MEASUREMENTS					REMARKS
		START	END	APPROX		CORR AREA Sq Deg				TIME U T	MEAS AREA Sq Deg	CORR AREA Sq Deg	MAX WIDTH H <sub>0</sub>	MAX INT H <sub>0</sub>	
				LAT	MER DIST										
HALE	23	1744	1804	N21 W41	7809		1-	3 C	1749	.20	.20				
HALE	23	1806	1819	N21 W41	7809		1-	3 C	1809	.70	.80				
HALE	23	1810	1812	N16 W90	7813		1-	3 C	1811	.20	.20			10	H
LOCK	23	1901	1920	N21 W39	7809		1-	3 C	1908	.40	.40				HJ
HALE	23	1904	1915	N21 W41	7809		1-	3 C	1908	.20	.20				HJ
HALE	23	1927	1935	N22 W42	7809		1-	3 C	1930	.40	.50				H
HALE	23	2033	2037	N15 W90	7813		1-	3 C	2034	.10	.10				
LOCK	23	2346	0012	N24 W32	7809		1-	3 C	2351	.50	.50			20	
OTTA	24	1635	1653	N25 W46	7809		1-	2 C	1648	.36	.47				
OTTA	24	1644	1656	N30 E90	7827		1-	1 C	1648	.30	.30				
OTTA	24	1650	1737	N26 W43	7809		1-	2 C	1703	1.08	1.35			19	E
SACP	24	1700	1738 U	N26 W43	7809		1-	3 C	1708	1.04	1.31				
CLMX	24	1701 E	1725	N28 W43	7809		1-	1 P	1708	.70	.90				
MCMA	24	1702	1733	N27 W45	7809		1-	1 P	1709	.80	1.30				S
HUAN	24	1704 E	1723 D	N27 W43	7809		1-	3 C	1818	.10	.10				E
HALE	24	1816	1822	N20 W48	7809		1-	3 C	1856	.30	.30				
HALE	24	1853	1905	N20 W48	7809		1-	3 C	1915	.30	.40				F
HALE	24	1910	1921	N23 W48	7809		1-	1 C	1915	.80	.90				F
HALE	24	2150	2219	N24 W27	7812		1-	2 P	2202	.40	.50				E
MCMA	24	2220 E	2240 D	N23 W28	7812		1-	3 C	2223	.20	.20				
HALE	25	0338	0346	N24 W28	7812		1-	3 C	0339	.20	.20				
HALE	25	0419	0446 D	N27 W51	7809		1-	2 P	0434	1.00	1.40				F
SACP	25	1349	1359	N19 W65	7809		1-	1.23		.80	1.23			17	
OTTA	25	1352	1358	N18 W77	7809		1-	C	1355	.15	.26				
HALE	25	1631	1640	N20 W69	7809		1-	C	1634	.10	.20				
HALE	25	1645	1651	N22 W60	7809		1-	2 C	1648	.40	.60				
SACP	25	1647	1655	N19 W67	7809		1-	C		.43	.79			20	
OTTA	25	1647	1718	N19 W78	7809		1-	1 C	1651	.24	.44				H
HALE	25	1744	1755	N18 W70	7809		1-	3	1752	.20	.40				H
HALE	25	1802	1816	N18 W70	7809		1-	3	1805	.20	.40				
LOCK	25	1921	1929	N17 W49	7812		1-	C	1924	.20	.20			10	
HALE	25	2005	2014	N20 W72	7809		1-	3	2007	.20	.40				F
LOCK	25	2005	2015	N19 W69	7809		1-	C	2008	.60	1.20			20	
SACP	25	2006	2010	N20 W69	7809		1-	C		.69	1.34			19	
LOCK	25	2209	2218	N19 W69	7809		1-	C	2212	.60	1.20			20	
MCMA	25	2210	2216	N20 W72	7809		1-	C	2212	.40	.40				E
LOCK	25	2240	2251	N19 W69	7809		1-	P	2245	1.10	1.10			20	H
VORO	25	2243	2247	N16 W75	7809		1-	P	2243	1.17	4.70			76	DH
LOCK	25	2310	2322	N32 E37	7824		1-	C	2315	.20	.20			10	
CULG	25	2317 E	2326	N32 E39	7824		1-	P	2317	.60	1.50				CG
LOCK	26	0021	0051	N27 E35	7824		1-	C	0026	.60	.60			20	L
CULG	26	0023	0041	N29 W38	7812		1-	C	0027	2.40	3.48				
SACP	26	0025	0036	N28 W37	7812		1-	C		.87	1.04			19	
CULG	26	0247	0258	N28 W38	7812		1-	C	0252	.40	.58				GL
CULG	26	0455	0510	N21 W78	7809		1-	C	0500	1.20					
TACH	26	0504	0510	N21 W79	7809		1-	C	0505	2.10	9.50			70	JL
ARCE	26	0855 E	1245	N19 W85	7809		1-	C	0855	.23	.94				
OTTA	26	1235		N24 W72	7809		1-	2 C	1241	.30	.60				

## SOLAR FLARES

MAY 1965

OBSERVATION	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURATION — MINUTES	IM- PORTANCE	OBS COND	MEASUREMENTS					REMARKS	
		START	END	APPROX LAT	APPROX MER DIST	M-MATH PLACEL REGION				TIME U T	MEAS AREA Sq Deg	CORR AREA Sq Deg	MAX WIDTH Ho	MAX INT %		
HUAN SACP SACP	MAY 1965	26 1238 E	1244 D													
	26 1239	1244	N26 W70		7809	1-	P	1240	.20	.50		18	D			
	26 1343	1349	N24 W68		7809	1-	C		.26	.35		17				
CULG CAPS LOCK CULG		27 0150	0200	N21 W79		7809	1-	C		.13						
			NO FLARE	PATROL												
	28 0054	0104 D	N30 E45		7827	1-	P	0100	.40	.66					G	
LOCK CULG	28 0916 E	1038 D	N25 W90		7812	2	2	0940	1.00			204	EJ			
	28 2034	2120	N29 E28		7827	1-	C	2046	.40	.40		20	L			
	28 2156	2210	N18 E66		7832	1-	C	2200	.60	1.50			CG			
LOCK LOCK	29 1840	1910	N38 E90		7838	1-	C	1845	.30	1.50		20	H			
	29 1857	1857														
	30 0635	0705	NO FLARE	PATROL												

COMMENCE - STANDARDS - SOLAR

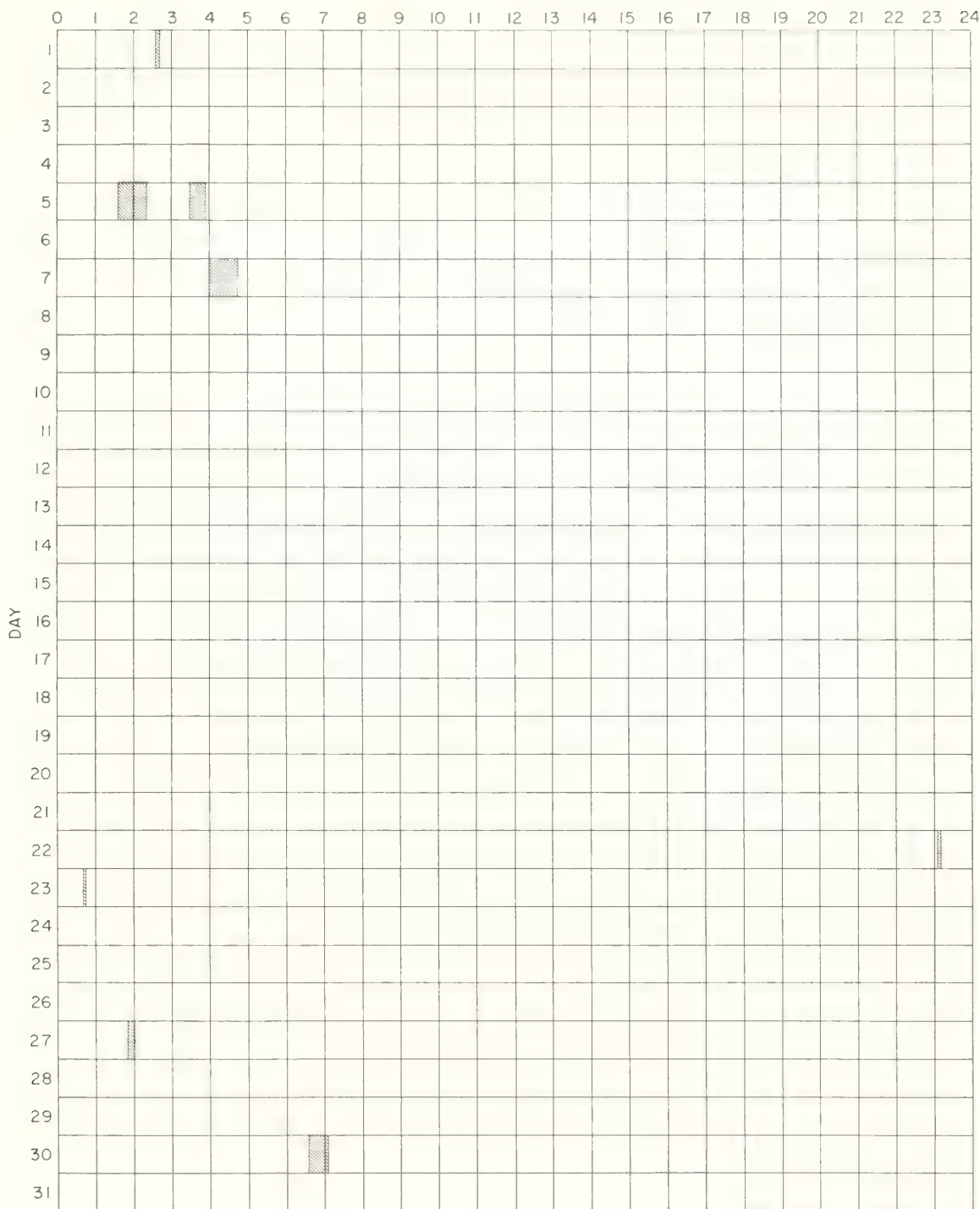


# INTERVALS OF NO FLARE PATROL OBSERVATIONS

III<sub>s</sub>

MAY 1965

HOUR-UT



COMMERCE - STANDARDS - BOULDER

Observatories included:

Abastumani	Capri-S (Swedish)	Tkomasan	Kodaikanal	Mitaka	Tachkent
Arcetri	Catania	Istanboul	Locarno	Nizamiah	Tortosa
Athenes	Climax	Izmiran	Lockheed	Ondrejov	Uccle
Bakou	Culgoora	Kandilli	Lvov	Ottawa	Voroshilov
Bucharest	Haleakala	Kanzelhöhe	Manila	Sacramento Peak	Wendelstein
Capetown	Herstmonceux	Karkov	McMath-Hulbert	Salonique	Wroclaw
Capri-F (German)	Huancayo	Kiev-Ko	Meudon	Siberie	Zürich

## IONOSPHERIC EFFECTS OF SOLAR FLARES

SHORT WAVE RADIO FADEOUTS      SUDDEN PHASE ANOMALIES  
 SUDDEN COSMIC NOISE ABSORPTION      SUDDEN ENHANCEMENTS OF SIGNAL  
 SUDDEN ENHANCEMENTS OF ATMOSPHERICS      SUDDEN FREQUENCY DEVIATIONS  
 SOLAR NOISE BURSTS AT 18 Mc/s

JULY 1965

JUL 1965	UNIVERSAL TIME			TYPE SWF IMP	IMPORTANCE						BUR	WIDE SPREAD INDEX	STATIONS	KNOWN FLARE
	START	END	MAX		ABS	SCNA	SEA	SPA	SES	SFD				
03	1709	1713									1	4	BO MC	
05	1837	1841									1	4	MC BO	
05	1845	1857									1	4	BO MC (SERIES)	
06	2240	2243									1	5	BO MC HA	
06	2251	2253									1	5	HA BO	
06	2303	2355	2324				1					1	A3	2304
06	2304	2345D	2308							004		1	BO (WWV10-0.4+WWV15-0.1)	
06	2306	2317									1	1	HA (SERIES)	
06	2308	0108	2315					X				1	HA (WWVL)	
06	2308	2345	2315	G 1+								5	TO AD AN BO CA FM HU OK	
08	0707	0729							X			1	KU	0704E
08	0707	0746	0716				2					4	TS KU	
08	0708	0748	0719	S 1+									DA MA OK	
08	1640	1845									1	4	MC BO (NOISE STORM)	1625
09	1757	1809									1	5	BO MC HA (SERIES)	
09	1909	1913									1	4	MC BO	
11	1511	1514									1	4	MC BO (DOUBLE BURST)	1510
11	1614	1628	1617							009		1	BO (WWV10-0.9)	1602
11	1917	1921									1	4	BO MC	1910
11	1921	1923									1	4	MC BU	
12	1405	1412	1407							002		1	BO (WWV15-0.2)	1405
12	1407	1411									1	5	MC BO RO	
13	1733	1734									1	4	MC BO	
14	1920	1926									1	4	BO MC	1921
14	2146	2148									1	4	MC BO	2142

COMMERCE - STANDARDS - BOULDER

TS = Tortosa, Spain

# RIOMETER EVENTS

IIIu

JULY 1965

GREAT WHALE RIVER

30 Mc s

JUL. 1965	START UT	END UT	MAX. UT	MAX. ABSORP. db, (tenths)	NO. OF PEAKS	JUL. 1965	START UT	END UT	MAX. UT	MAX. ABSORP. db, (tenths)	NO. OF PEAKS
1	*		0857	} 28	29	17	0656	1230	1154	5	2
3		1020				18	1534	1608	1539	10	1
3	2054	2300	2110			19	0602	2024	0715	28	7
4	0150	0756	0201	20	3	20	0038	0145	0045	5	1
6	0316	2005	1344	25	8	21	0044	0904	0314	22	5
7	0102	1320	0421	24	4	22	0514	0822	0623	5	1
8	0032	0540	0242	40	3	22	2332	0918	0536	11	6
8	1834	1334	0315	40	4	23	2002	2302	2015	6	3
9	1740	2130	2026	4	1	24	0126	1707	0246	17	6
10	0259	1420	0752	15	3	25	0122	1050	0223	24	3
10	1738	2311	1840	5	4	27	0436		} 43		
13	0504	1226	0810	10	1	28		1453	0413		9
14	0200	0715	0503	6	4	29	0232	2106	0601	30	9
15	0216	2008	0656	15	5	30	0200	1512	0432	11	3
16	0456	0854	0500	9	3						

COMMERCE - STANDARDS - BOULDER

\* June 30, 0150 UT

IVa

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

AUGUST 1965

ARO-OTTAWA  
DRAO-PENTICTON2800 Mc/s  
2700 Mc/s

AUG. 1965	U R A N E	DESCRIPTIVE TYPE	START UT	DURATION HRS MIN	MEAN FLUX	MAXIMUM		REMARKS
						TIME	FLUX	
30	3	Simple 3	1848	1 20	0.7	Indet.	1.4	

COMMERCE - STANDARDS - BOULDER

# SOLAR RADIO EMISSION INTERFEROMETRIC OBSERVATIONS

IVb

JULY 1965 -- AUGUST 1965

BOEING - SEATTLE

223 Mc/s

July 1965	Type of Event	Start UT	End UT	Max UT	Flux Density at Time of Maximum $10^{-22} W_m^{-2} (cps)^{-1}$
6	Group of bursts	2308	2327	2325.7	40
7	Noise storm	1600	0230*		
10	Series of bursts	2109.4	2115.5	2111.2	11
August					
11	Noise storm	1610	1810		

COMMERCE - STANDARDS - BOULDER

\* July 10, 1965

The equipment was down for the following periods:

July 2	1615 UT to 2100 UT
30	2334 UT to 2344 UT
August 27	0015 UT to 0200 UT
28	1600 UT to 1845 UT
29	1600 UT to 1750 UT
30	1600 UT to 1730 UT
31	1600 UT to 1830 UT

Normal observing hours for July were from 1600 UT to 0200 UT and for August from 1600 UT to 0130 UT.

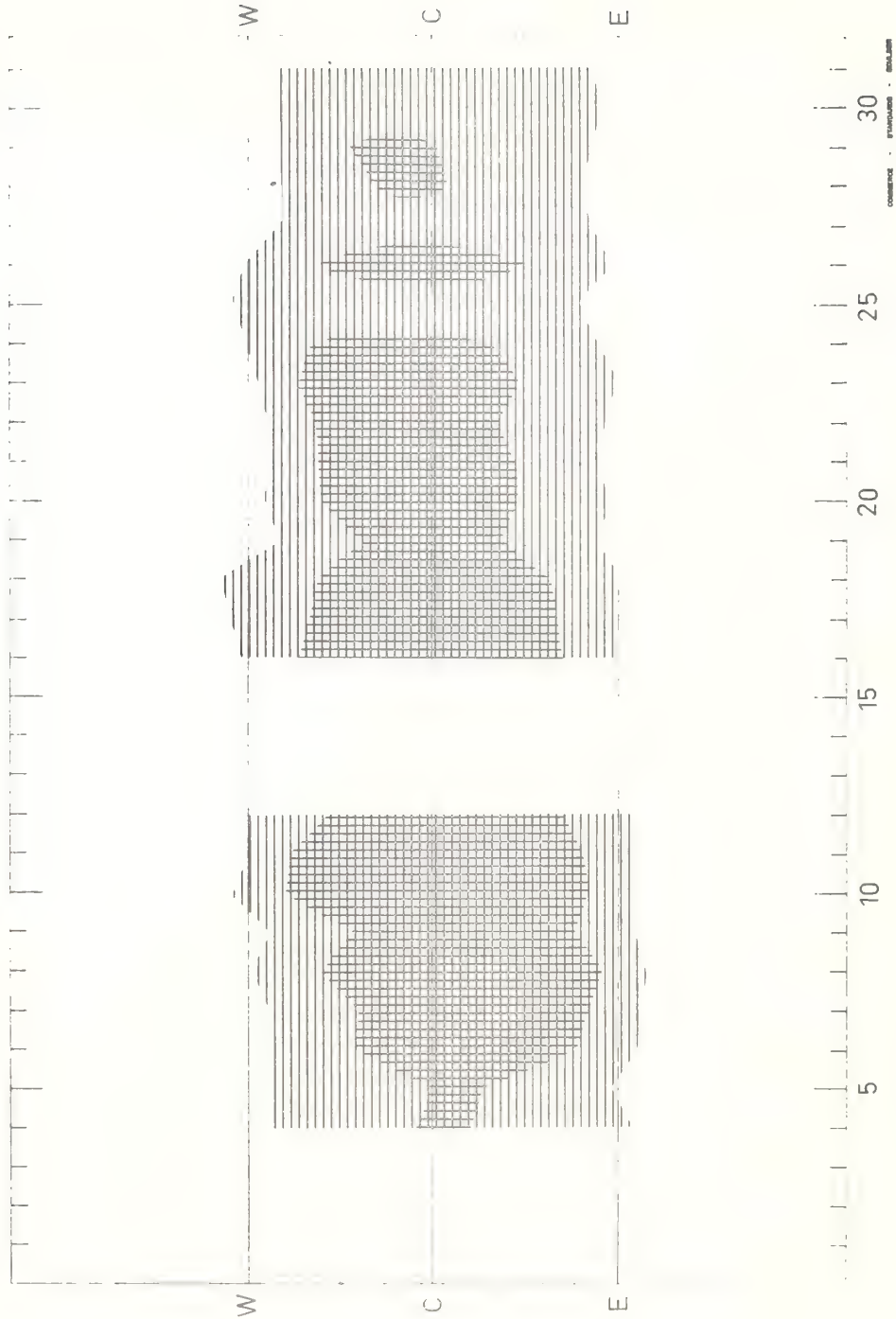


# SOLAR RADIO EMISSION INTERFEROMETRIC OBSERVATIONS

AUGUST 1965

NANÇAY

169 Mc/s



AUGUST 1965

# SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

IVd

AUGUST 1965

NBS BOULDER

108 Mc s

AUG. 1965	TYPE	START UT	TIME OF MAXIMUM UT	DURATION MINUTES	INTENSITY
12	3	1301.3	1302.0	1.6	3
31	3	1822.6	1822.9	1.8	2

COMMERCE - STANDARDS - BOULDER

## NOMINAL TIMES OF OBSERVATION

AUGUST 1965

NBS BOULDER

108 Mc s

AUG. 1965	HOURS OF OBSERVATION U.T.	HOURS OF INTERFERENCE U.T.	AUG. 1965	HOURS OF OBSERVATION U.T.	HOURS OF INTERFERENCE U.T.
1	1203-0155	2248-0153 1920-2320	15	1216-0139	1922-2003
2	1204-0154		16	1217-0138	2210-2323
3	1205-0153		17	1218-0137	
4	1206-0152		18	1219-0136	2128-2245
5	1207-0151		19	1220-0135	
6	1208-0150	1843-2335	20	1221-0133	
7	1209-0148		21	1222-0132	1933-0110
8	1210-0147		22	1223-0130	2055-2117
9	1210-0146		23	1224-0129	1835-0007
10	1211-0145		24	1225-0127	
11	1212-0144	2130-0025 1810-2206	25	1226-0126	
12	1213-0143		26	1227-0124	
13	1214-1449; 1503-1520; 1534-0142		27	1228-0123	
			28	1229-0121	1950-2200
			29	1229-0120	
14	1215-0140	1800-2100; 0107-0140	30	1230-0118	1820-2230
			31	1231-0117	

COMMERCE - STANDARDS - BOULDER

Most of the interference was due to atmospherics.

IVc

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

JULY 1965 — AUGUST 1965

HALEAKALA

107 Mc/s

None Observed

COMMERCE - STANDARDS - BOULDER

Normal observing hours are from sunrise to sunset which for July is on the average from 1552UT to 0509UT and for August from 1604UT to 0454UT.

No observations were made July 1, 0010-0440  
July 24, 2050-2400  
Aug. 27, 1835-2305

# SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

IVf

AUGUST 1965

**High Altitude Observatory  
Boulder**

**7.6-41 Mc/s**

Date Aug 1965	Bursts			Frequency Range (Mc/s)	Date Aug 1965	Bursts			Frequency Range (Mc/s)
	Type	Time (U.T.)	Inten- sity			Type	Time (U.T.)	Inten- sity	
3 Aug	No observ.	1400-1500			8 Aug	No observ.	2030-2400		
	III	1626:15-1626:45	1+	12-41	9	No observ.	0000-0030		
	III	2020:45-2022:30	2	8-41	10	No observ.	1400-1700		
	III	2023-2024	1+	12-41	13	III	2313-2313:30	1	17-41
	III	2023:45-2024:30	1	12-37		III	2339:15-2340:30	1	12-41
4	III	2358:15-2358:45	1	28-41	14	III	1735:45-1736:15	1	2-41
	III	2359-2359:30	1	20-41		III	1739-1739:15	1	23-36
	III	2102:15-2104:15	2	5-41		III	1847-1847:30	1-	22-41
	III	2106-2106:15	1-	24-37		III	2015:45-2016:15	1-	21-41
7	No observ.	1900-2130			25	No observ.	1650-1732		

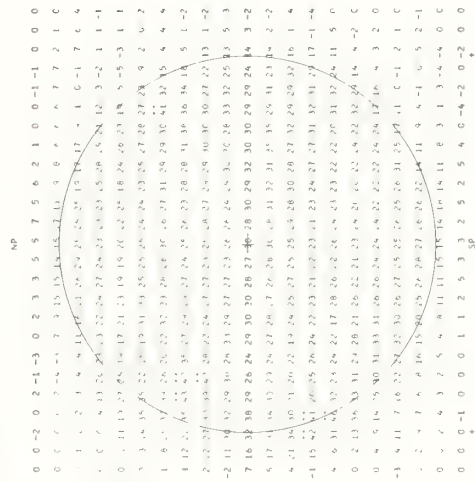
COMM-FEC - STANDARD - BULDER

## SOLAR RADIO EMISSION SPECTROHELIOGRAMS

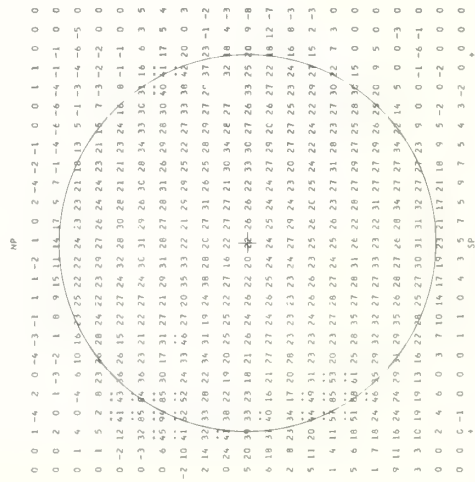
STANFORD

AUGUST 1965

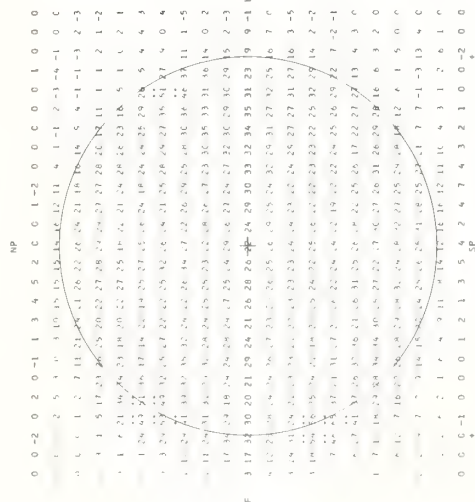
9.1 cm



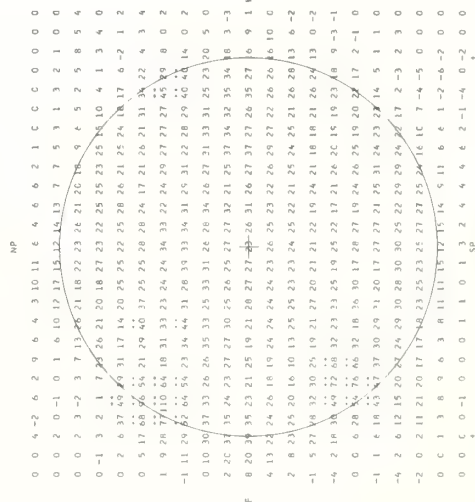
STANFORD, 01 AUG 1965 20-21 HRS UT. S = 72 (MNC). BRIGHTNESS UNIT = 1000 K



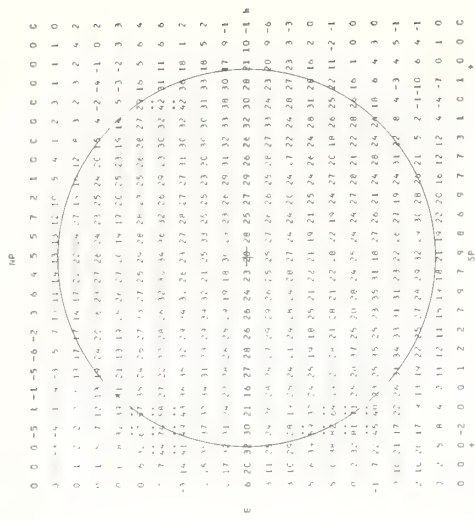
STANFORD, 04 AUG 1965 20-21 HRS UT. S = 78. BRIGHTNESS UNIT = 1000 K



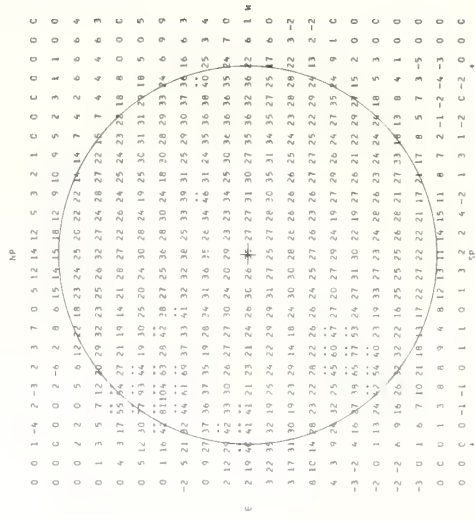
STANFORD, 02 AUG 1965 20-21 HRS UT. S = 73. BRIGHTNESS UNIT = 1000 K



STANFORD, 05 AUG 1965 20-21 HRS UT. S = 76. BRIGHTNESS UNIT = 1000 K



STANFORD, 03 AUG 1965 20-21 HRS UT. S = 77. BRIGHTNESS UNIT = 1000 K



STANFORD, 06 AUG 1965 20-21 HRS UT. S = 79. BRIGHTNESS UNIT = 1000 K

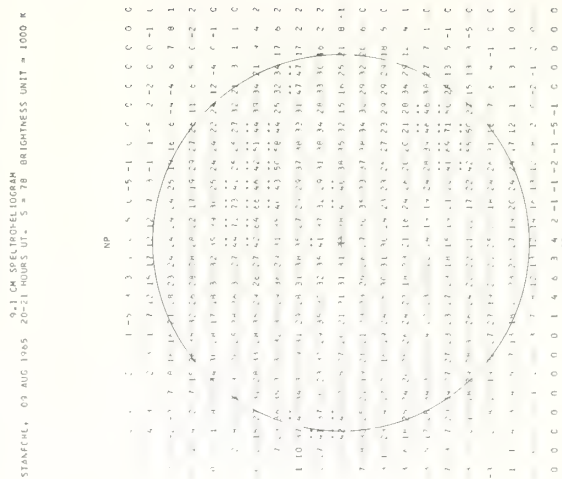
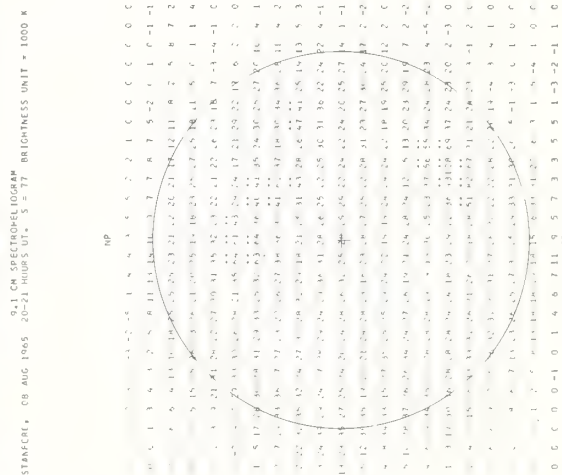
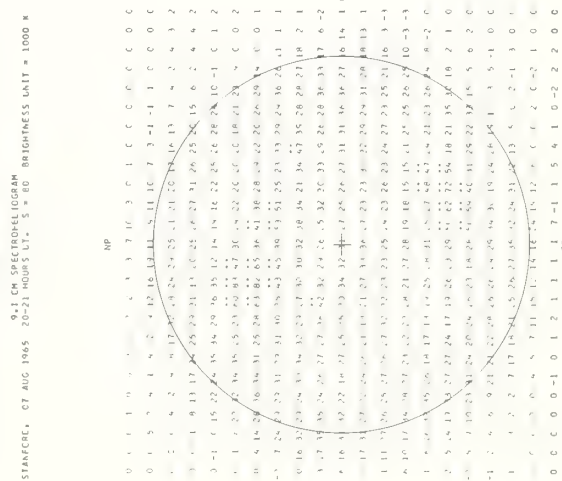
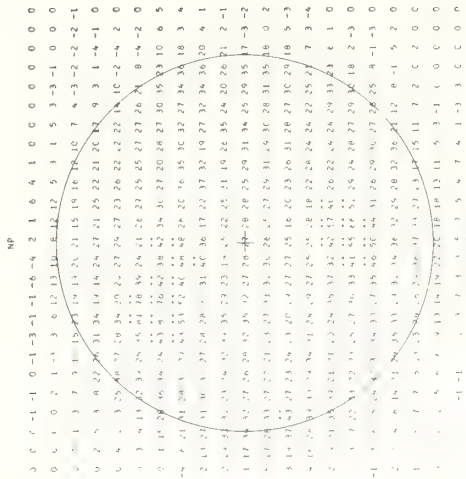
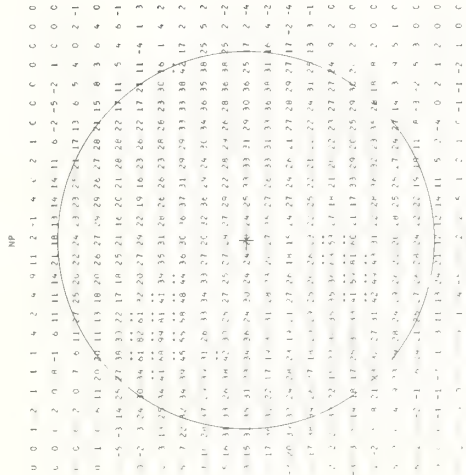
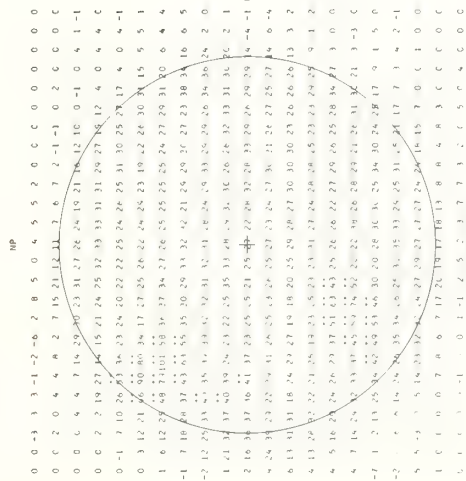


# SOLAR RADIO EMISSION SPECTROHELIOGRAMS

STANFORD

AUGUST 1965

9.1 cm



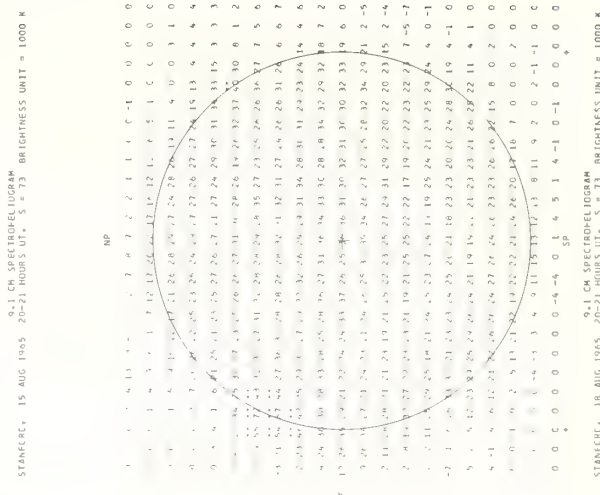
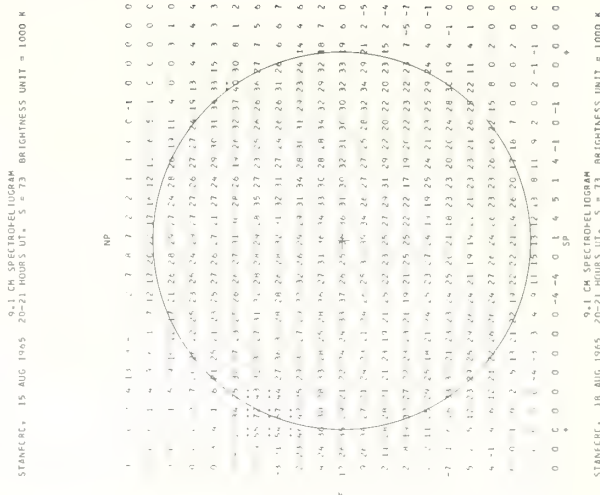
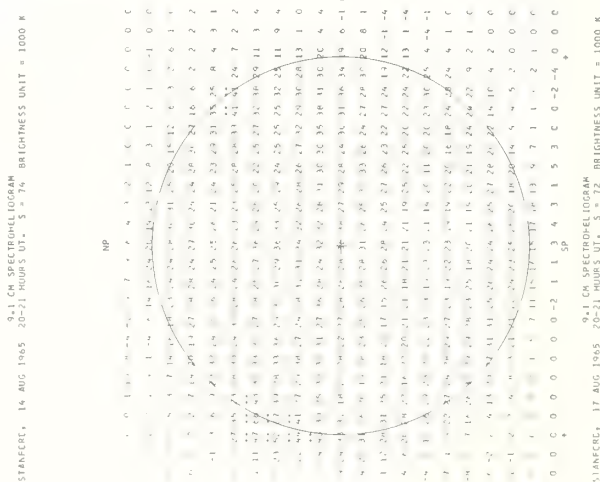
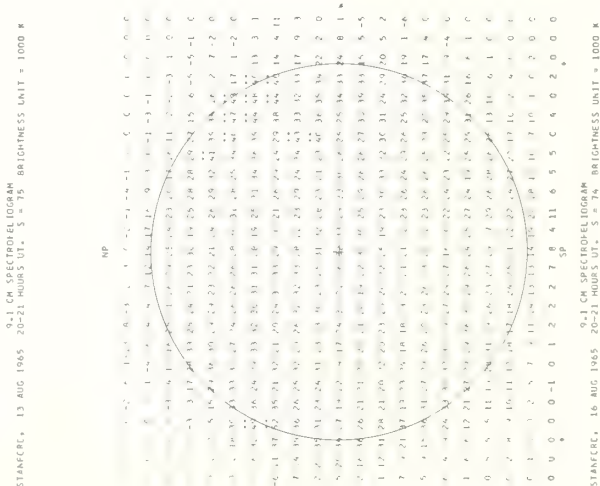
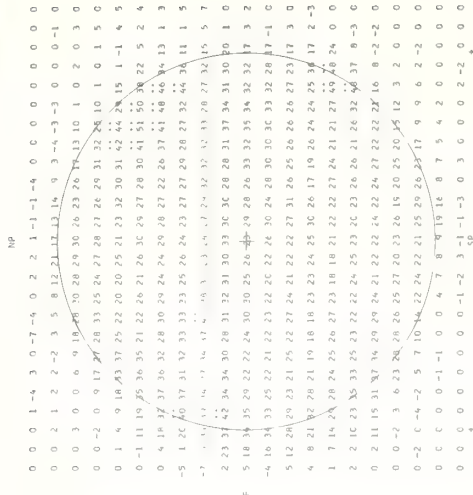
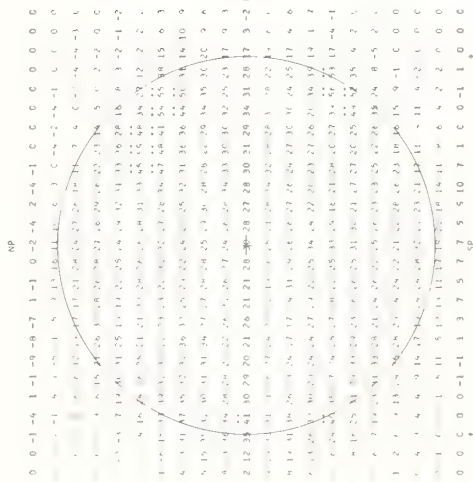
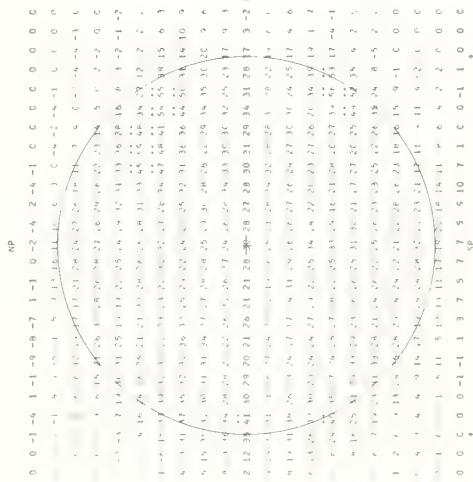
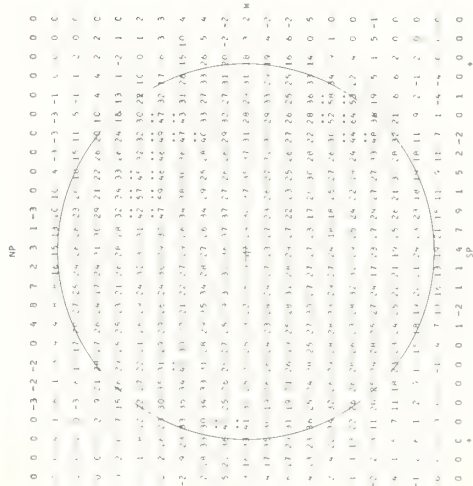
IVh

# SOLAR RADIO EMISSION SPECTROHELIOGRAMS

STANFORD

AUGUST 1965

9.1 cm

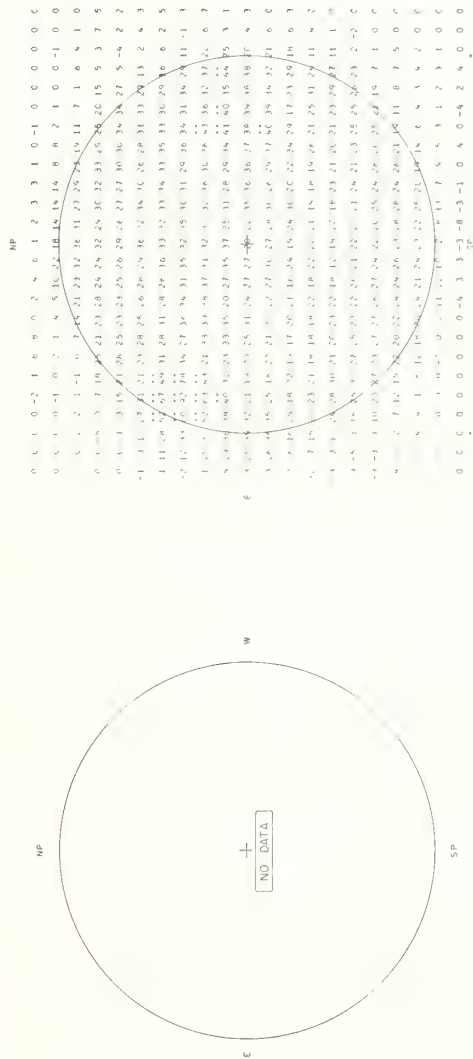


# SOLAR RADIO EMISSION SPECTROHELIOGRAMS

STANFORD

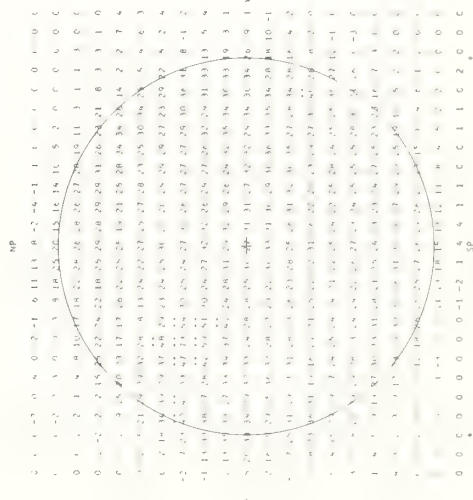
AUGUST 1965

9.1 cm

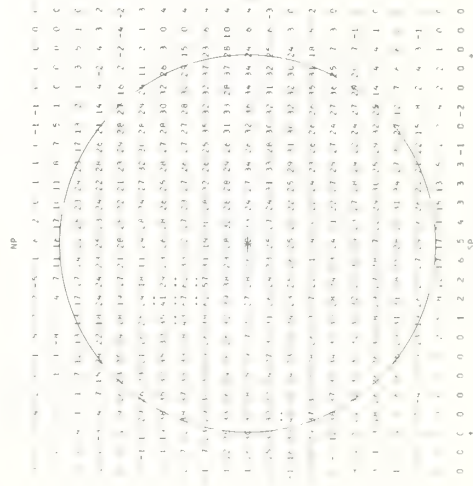


19 AUG 1965

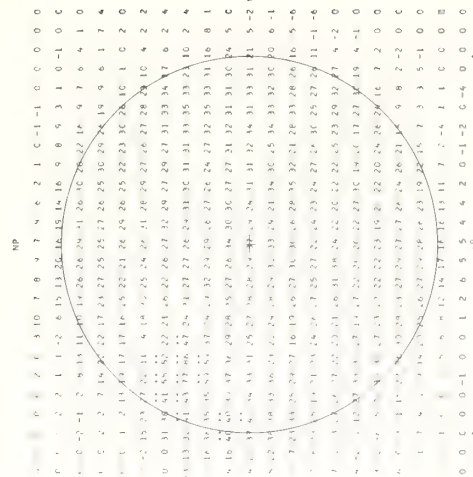
STANFORD, 20 AUG 1965 20-21 HRS UT. S = 74. BRIGHTNESS UNIT = 1000 K



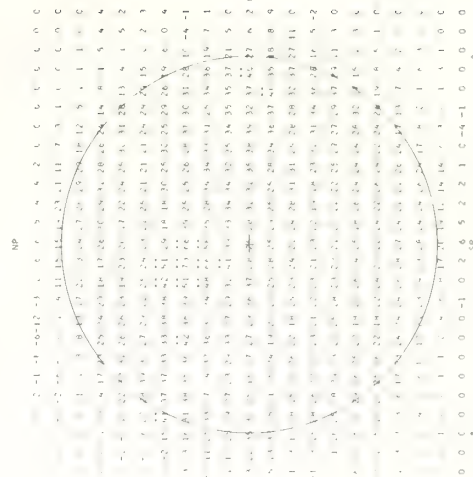
STANFORD, 22 AUG 1965 20-21 HRS UT. S = 73. BRIGHTNESS UNIT = 1000 K



STANFORD, 29 AUG 1965 20-21 HRS UT. S = 73. BRIGHTNESS UNIT = 1000 K



STANFORD, 21 AUG 1965 20-21 HRS UT. S = 74. BRIGHTNESS UNIT = 1000 K



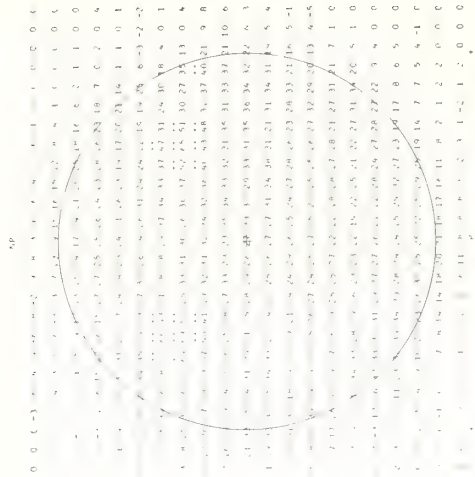
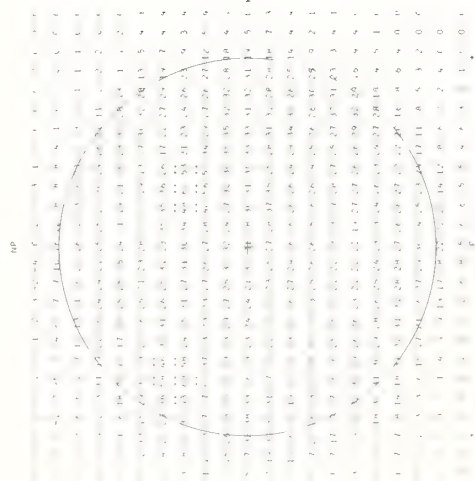
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## SOLAR RADIO EMISSION SPECTROHELIOGRAMS

STANFORD

AUGUST 1965

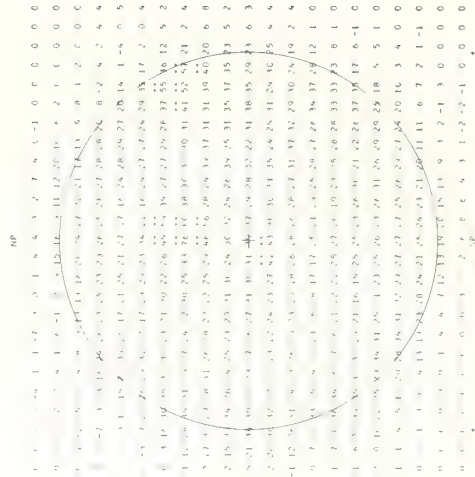
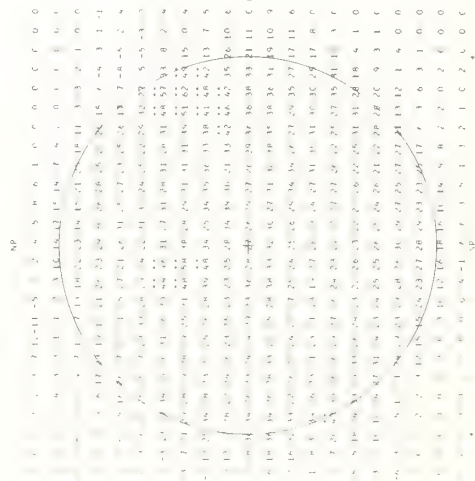
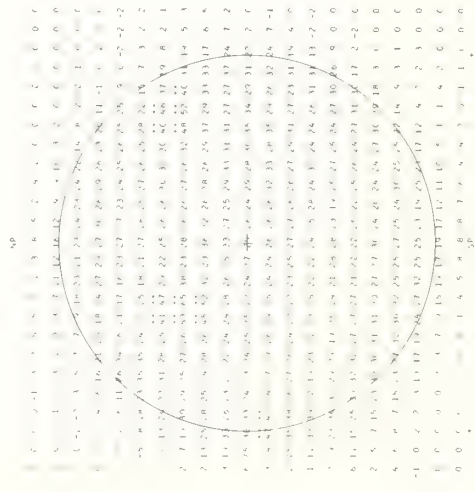
9.1 cm



STANFORD, 25 AUG 1965, 20-21 HOURS UT, 5-7.2 BRIGHTNESS UNIT - 1000 K

STANFORD, 26 AUG 1965, 20-21 HOURS UT, 5-7.2 BRIGHTNESS UNIT - 1000 K

STANFORD, 27 AUG 1965, 20-21 HOURS UT, 5-7.2 BRIGHTNESS UNIT - 1000 K



STANFORD, 28 AUG 1965, 20-21 HOURS UT, 5-7.2 BRIGHTNESS UNIT - 1000 K

STANFORD, 29 AUG 1965, 20-21 HOURS UT, 5-7.2 BRIGHTNESS UNIT - 1000 K

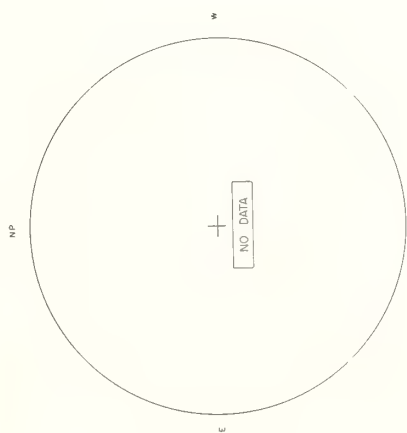
STANFORD, 30 AUG 1965, 20-21 HOURS UT, 5-7.2 BRIGHTNESS UNIT - 1000 K

# SOLAR RADIO EMISSION SPECTROHELIOGRAMS

9.1 cm

AUGUST 1965

STANFORD



SP

31 AUG 1965

STANFORD - STANFORD - STANFORD



# COSMIC RAY INDICES

## (Neutron Monitors)

JULY 1965

July 1965	CHURCHILL	CLIMAX	DALLAS
	DAILY AVERAGE COUNTS PER HOUR	DAILY AVERAGE COUNTS PER HOUR	DAILY AVERAGE COUNTS PER HOUR
1	6543.1	3328.5	6423.2
2	6541.2	3333.1	6426.5
3	6540.3	3331.2	6428.6
4	6551.3	3338.3	6440.1
5	6540.0	3326.0	6413.7
6	6528.6	3340.6	6429.9
7	6546.1	3336.3	6427.5
8	6550.0	3324.8	6416.7
9	6528.0	3324.1	6427.2
10	6497.0	3317.9	6419.3
11	6504.8	3329.6	6427.9
12	6523.5	3334.9	6442.7
13	6484.4	3290.5	6372.7
14	6518.9	3307.3	6401.0
15	6526.8	3322.8	6416.3
16	6539.1	3331.0	6424.9
17	6548.3	3338.3	6434.3
18	6554.9	3344.5	6451.6
19	6465.7	3311.0	6404.6
20	6461.5	3298.5	6388.5
21	6477.3	3305.0	6406.5
22	6473.0	3306.7	6404.5
23	6489.9	3308.4	6394.5
24	6507.6	3308.1	6404.3
25	6503.3	3318.8	6409.0 (20)
26	6495.9	3317.1 (34)	-
27	6470.4	3301.4	6385.1
28	6463.7	3306.4	6397.2
29	6457.7	3297.0	6397.5
30	6462.0	3304.9	6423.1
31	6471.8 (20)	3300.2	6423.2

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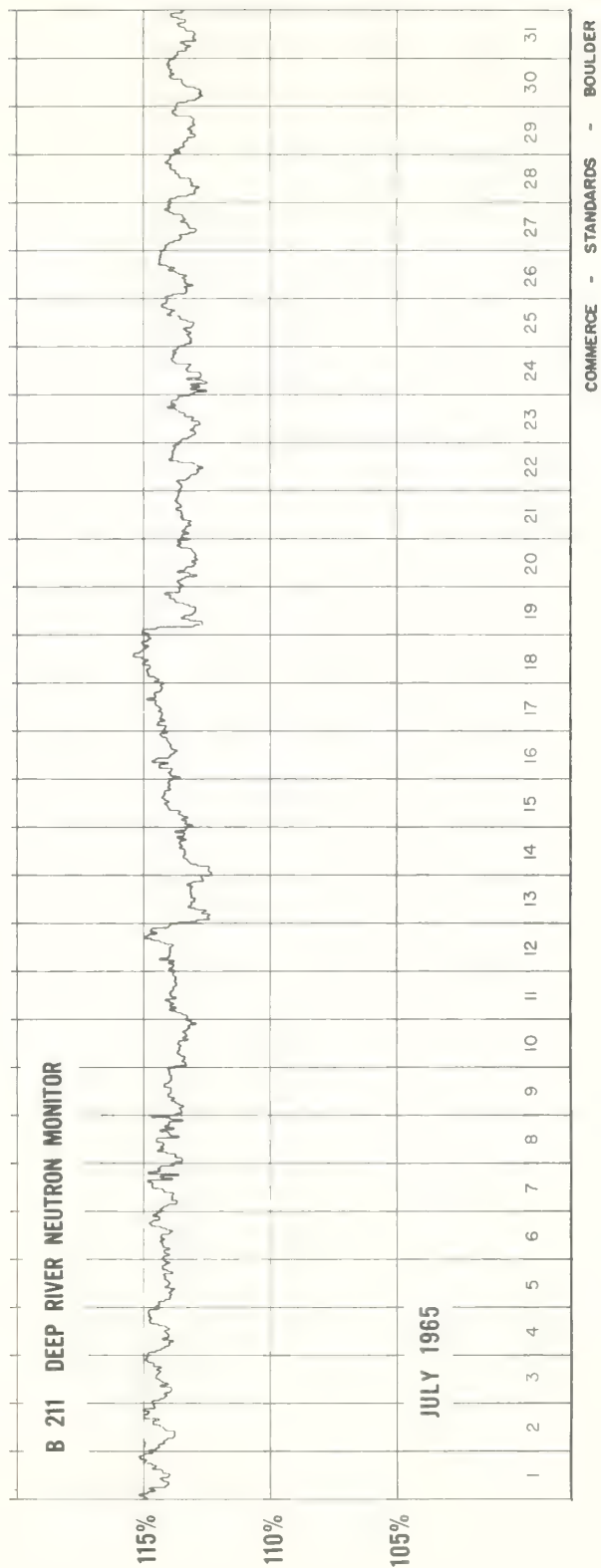
( ) Number of hours for which data are available if less than 24 (or number of section hours if less than 40 for Climax).

Churchill Super Neutron Monitor, Scaling Factor 120.

Climax IGC Station B305, Scaling Factor 128.

Dallas Super Neutron Monitor, Scaling Factor 120.

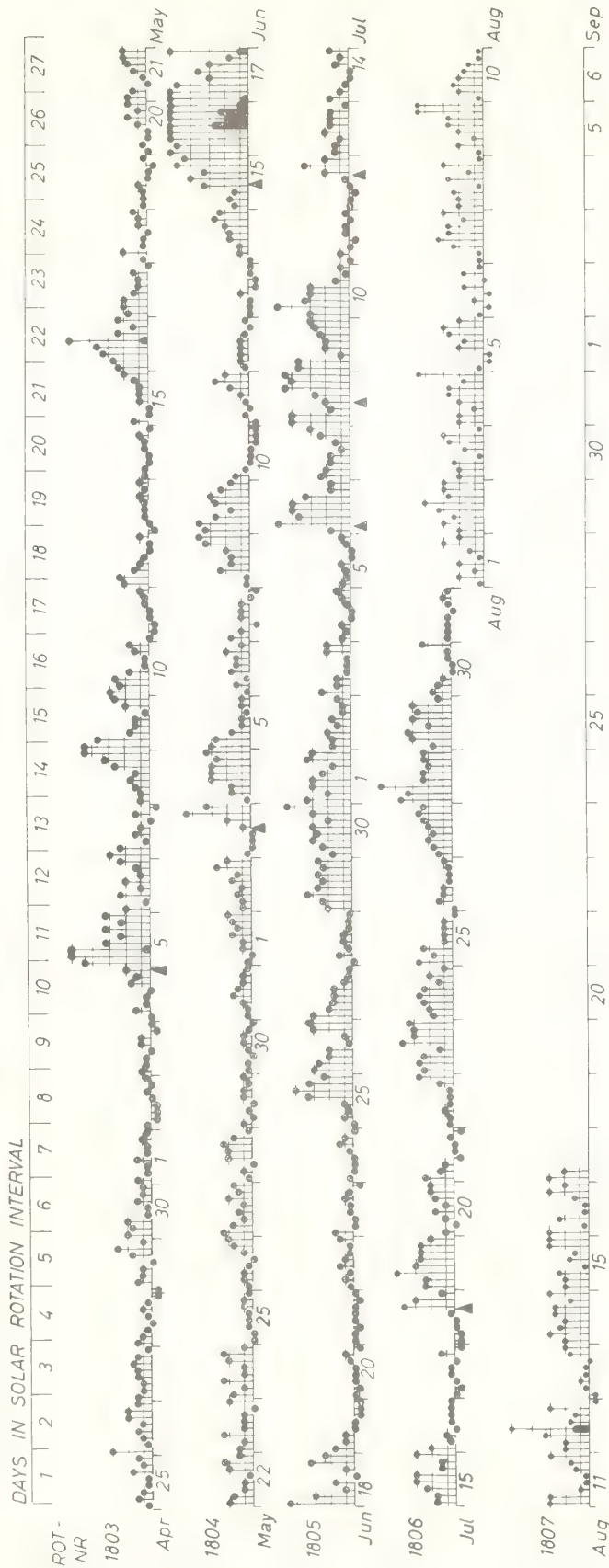
# **COSMIC RAY INDICES** **(Pressure Corrected Hourly Totals)**



## GEOMAGNETIC ACTIVITY INDICES

JULY 1965

July 1965	C	Values Kp								Sum	Ap	Final Selected Days	
		Three hour Gr. interval											
		1	2	3	4	5	6	7	8				
1	0.8	3+	2o	3o	3o	2+	2-	3+	3o	22-	13	Five Quiet	
2	0.3	2-	2-	2o	1+	2-	1o	1o	1+	12-	5		
3	0.4	2+	1+	1+	1-	1-	1-	2o	2o	11o	5		
4	0.1	1o	1-	1o	0+	0+	1-	1o	1+	6+	3		4
5	0.2	1o	1-	1-	1o	0+	0+	1-	1o	6-	3		5
6	1.1	2-	5-	4-	4o	4o	3+	2-	2-	25-	19	11	
7	0.4	2+	2o	2-	2-	1o	1+	2+	3o	15+	8	17	
8	1.2	4o	4o	2-	2o	3-	4+	4o	4+	27o	21	31	
9	0.8	4-	4-	1o	2o	2o	2+	3-	3o	20+	12		
10	1.0	3o	5-	3+	3o	3o	1+	1-	1o	20o	14		
11	0.0	0+	1o	0+	0o	1-	1-	0+	1-	4o	2	Five Disturbed	
12	0.5	0+	0+	0o	0+	1-	2o	3+	2o	9o	5		
13	0.4	1+	1+	1o	2o	2-	2-	2-	1-	11+	5		
14	0.2	2-	1o	1-	0+	0+	1+	1o	2-	8o	4		6
15	0.7	2-	2-	2+	3o	3o	1+	1+	3o	17+	10		8
16	0.2	2o	1-	1o	0+	1-	1-	1-	1-	7-	4	10	
17	0.0	0+	0o	0+	1-	1-	0+	1+	0o	4-	2	23	
18	0.6	0o	0o	0+	0+	1-	4-	3o	1+	9+	6	28	
19	1.0	2+	2+	4o	3o	3-	3-	3-	2o	22-	13		
20	0.3	1o	0+	1o	2-	1o	2-	2o	2o	11-	5		
21	0.1	2+	1+	1o	0o	0+	0+	1-	0o	6o	3	Ten Quiet	
22	0.2	1-	1-	1o	1-	1-	1-	1+	3-	8+	4		
23	0.8	2+	3-	2+	1+	4-	3o	3o	3+	22-	13		
24	0.6	2-	2o	2+	3-	2+	1+	2o	1o	15+	7		4
25	0.3	3-	2-	2+	1o	1o	1o	1o	0+	11o	6		5
26	0.2	0+	1+	1o	1o	1-	1-	1-	1o	7-	4	11	
27	0.4	1+	2-	2o	2-	2o	2+	3-	2+	16o	8	14	
28	0.9	4-	3+	5-	2+	2+	2o	2+	2+	23o	15	16	
29	0.8	2-	3o	3+	2o	3o	3-	3o	1+	20o	12	17	
30	0.2	2-	1+	1o	0+	0+	1-	1-	2+	8+	4	21	
31	0.1	1-	1-	1-	1-	0+	1-	1o	1-	5+	3	26	
												30	
												31	
Mean:	0.48									Mean:	8		



Kp till 1965 July 31

(Ks from Wingst and Göttingen till Aug. 17)

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## CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

NORTH ATLANTIC, NORTH PACIFIC

JULY 1965

JUL 1965	WHOLE DAY			ADVANCE FORECASTS (Jc- REPORTS) FOR WHOLE DAY	NORTH ATLANTIC								NORTH PACIFIC								GEOMAGNETIC INDICES							
	INDICES				6-HOURLY				SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF				6-HOURLY				K <sub>FR</sub>		A <sub>FR</sub>		K <sub>SI</sub>		A <sub>SI</sub>					
					QUALITY FIGURES								QUALITY FIGURES															
	NORTH ATLANTIC	NORTH PACIFIC	AVERAGE HIGH LATITUDE		00 TO 06	06 TO 12	12 TO 18	18 TO 24	00 TO 06	06 TO 12	12 TO 18	18 TO 24	00 TO 06	06 TO 12	12 TO 18	18 TO 24	HALF DAY (1) (2)	OB- SERVED	PRE- DICTED	HALF DAY (1) (2)								
01	6+	6	6	6	6+	6 <sub>0</sub>	6+	7-	6	6	6	7	5	6	6	6	3	3	12	11	3	2	13					
02	6+	6	6	6	7-	6 <sub>0</sub>	7-	7-	6	6	7	7	5	5	6	6	2	2	6	9	2	1	07					
03	7-	6	6	7	7-	6 <sub>0</sub>	6+	7 <sub>0</sub>	7	6	7	7	5	6	6	6	2	1	5	6	1	0	02					
04	7-	6	6	7	7-	6 <sub>0</sub>	7-	7-	7	6	7	7	6	6	6	6	1	1	3	5	1	0	02					
05	7-	6	6	7	7-	7-	7-	7-	7	6	7	7	5	6	7	6	2	1	4	5	1	0	02					
06	6+	6	6	6	6+	6+	7-	6+	7	6	7	7	6	5	6	6	3	3	16	8	(4)	2	27					
07	6+	6	6	6	6+	6 <sub>0</sub>	7-	7-	6	6	7	7	6	5	6	6	2	2	9	6	2	1	05					
08	6+	6	6	7	7-	6 <sub>0</sub>	7-	7-	6	6	6	7	6	6	6	6	3	(4)	22	5	2	3	13					
09	7-	6	6	7	7-	6-	7-	7 <sub>0</sub>	6	6	6	7	5	5	6	6	3	3	15	5	2	2	08					
10	7-	5	6	6	7-	6 <sub>0</sub>	6+	7 <sub>0</sub>	7	6	7	7	5	4	6	6	(4)	2	13	11	(4)	2	18					
11	7-	6	6	6	7-	6 <sub>0</sub>	7-	7-	7	6	7	7	6	6	6	6	1	1	2	13	0	0	02					
12	7-	6	6	6	6+	6+	7-	7 <sub>0</sub>	7	6	7	7	5	6	7	6	1	2	6	11	0	1	02					
13	7-	6	6	6	7-	7-	7-	7 <sub>0</sub>	7	6	7	7	5	4	6	6	1	1	4	9	2	1	05					
14	7-	6	6	7	7-	7-	7-	7-	7	6	7	7	6	6	6	6	1	1	3	6	1	0	02					
15	6+	6	6	7	6+	6 <sub>0</sub>	7-	7 <sub>0</sub>	6	6	7	7	4	6	6	6	2	2	9	5	3	2	11					
16	7-	5	6	7	7-	7-	7-	7 <sub>0</sub>	6	6	7	7	5	5	4	6	1	0	2	7	1	0	02					
17	7-	6	6	7	7-	6+	7-	7 <sub>0</sub>	7	7	7	7	6	6	7	6	0	1	1	7	0	0	01					
18	7-	6	6	7	7-	6+	7-	7 <sub>0</sub>	7	7	7	7	6	6	7	6	1	2	6	3	0	2	03					
19	6+	6	6	7	7-	6 <sub>0</sub>	6+	6+	7	6	7	7	6	5	6	6	3	3	15	5	(4)	2	17					
20	7-	5	6	7	6+	6+	7-	7 <sub>0</sub>	6	6	7	7	5	4	6	6	1	2	5	5	2	1	04					
21	7-	6	6	7	7 <sub>0</sub>	6+	7-	7 <sub>0</sub>	7	7	7	7	6	6	6	6	2	1	5	5	1	0	02					
22	7-	6	6	7	7-	7-	7-	7 <sub>0</sub>	7	7	7	7	6	4	6	6	2	3	6	6	1	1	03					
23	6+	6	6	7	6+	6-	7-	7 <sub>0</sub>	7	6	7	7	6	4	6	6	2	3	11	5	2	2	10					
24	6+	6	6	7	6+	6 <sub>0</sub>	7-	7-	7	6	7	7	5	5	6	6	3	2	9	3	3	1	10					
25	6+	6	6	6	7-	6-	7-	7-	7	6	7	7	6	5	6	6	2	1	5	8	2	0	05					
26	7-	6	6	6	7-	6+	7-	7 <sub>0</sub>	6	6	7	7	6	5	6	6	2	0	3	9	1	0	02					
27	7-	6	6	6	7-	6+	7-	7-	7	6	7	7	6	5	6	6	2	2	9	9	2	2	07					
28	6+	5	6	7	6 <sub>0</sub>	5+	6+	7-	7	6	7	7	6	5	6	6	(4)	2	17	7	(4)	2	20					
29	6+	5	6	6	6+	6 <sub>0</sub>	7-	7-	6	6	7	7	5	5	6	6	3	2	13	9	3	2	11					
30	6+	6	6	7	6+	6+	7-	7-	7	6	7	7	4	6	6	6	1	1	4	5	1	1	03					
31	6+	6	6	7	7-	5+	7-	7-	7	6	7	7	5	6	6	6	1	1	2	3	0	0	02					
QUIET				P	12					21	22	25	29															
				S	19					10	9	6	2															
				U	0					0	0	0	0															
				F	0					0	0	0	0															
DISTURBED				P	0					0	0	0	0															
				S	0					0	0	0	0															
				U	0					0	0	0	0															
				F	0					0	0	0	0															

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1) THE ADVANCE Jc-FORECASTS ARE SCORED AGAINST THE AVERAGE HIGH LATITUDE WHOLE-DAY INDICES.

2) THE OBSERVED INDICES FOR THE NORTH PACIFIC ARE LOW WEIGHT BECAUSE OF INSUFFICIENT DATA AVAILABLE FOR THEIR PREPARATION.

3) THE PREDICTED A<sub>FR</sub> INDICES ARE ISSUED EACH WEDNESDAY FOR THE COMING SEVEN DAYS. THE VALUE FOR THE FIRST DAY OF EACH PREDICTION PERIOD IS UNDERScoreD.



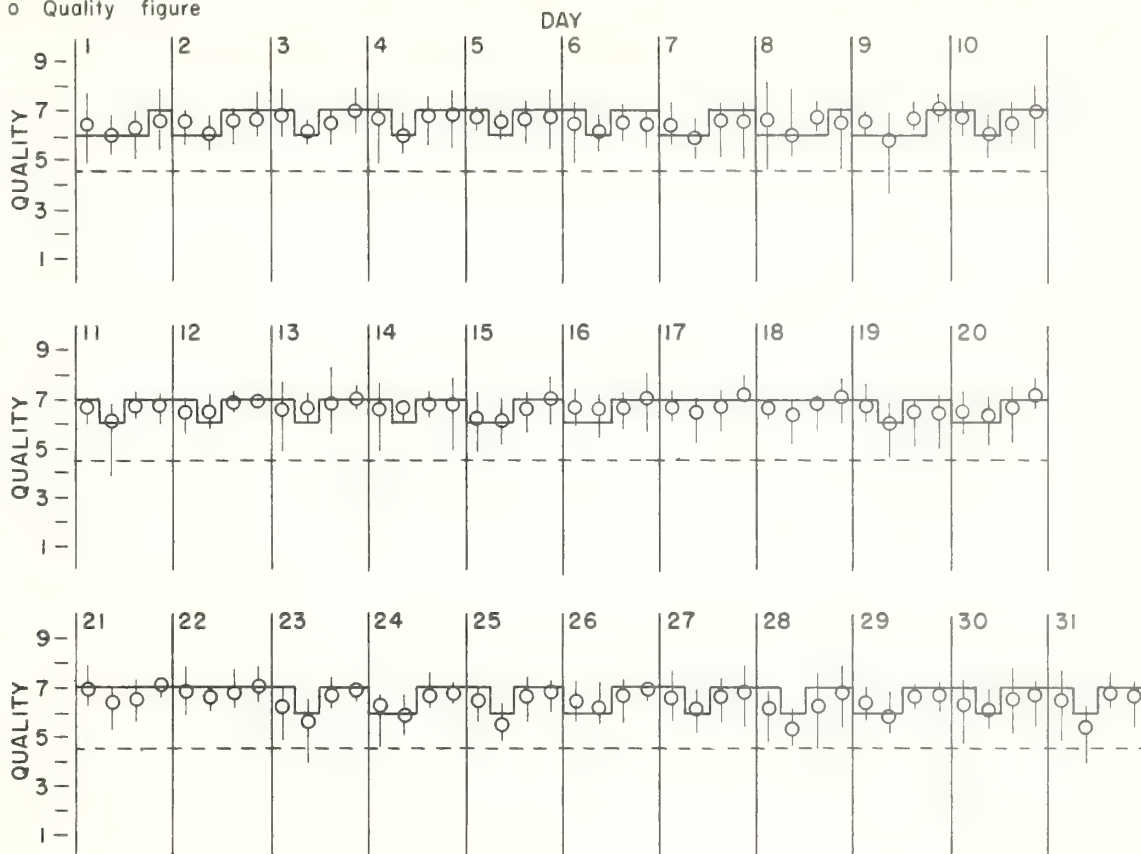
## NORTH ATLANTIC

JULY 1965

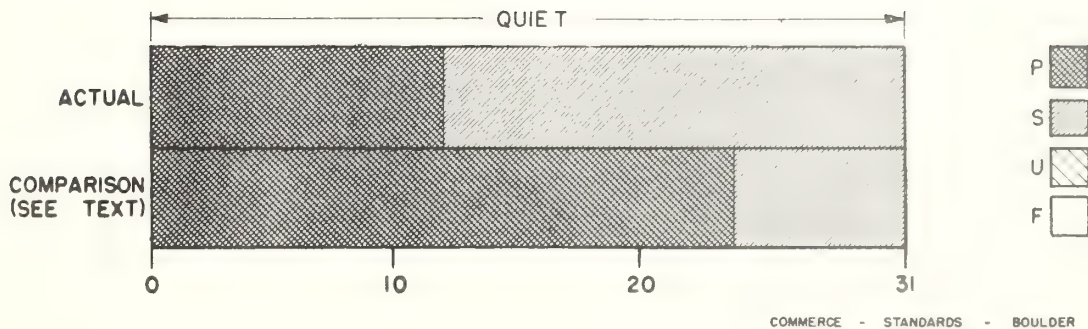
— Short-term forecast

o Quality figure

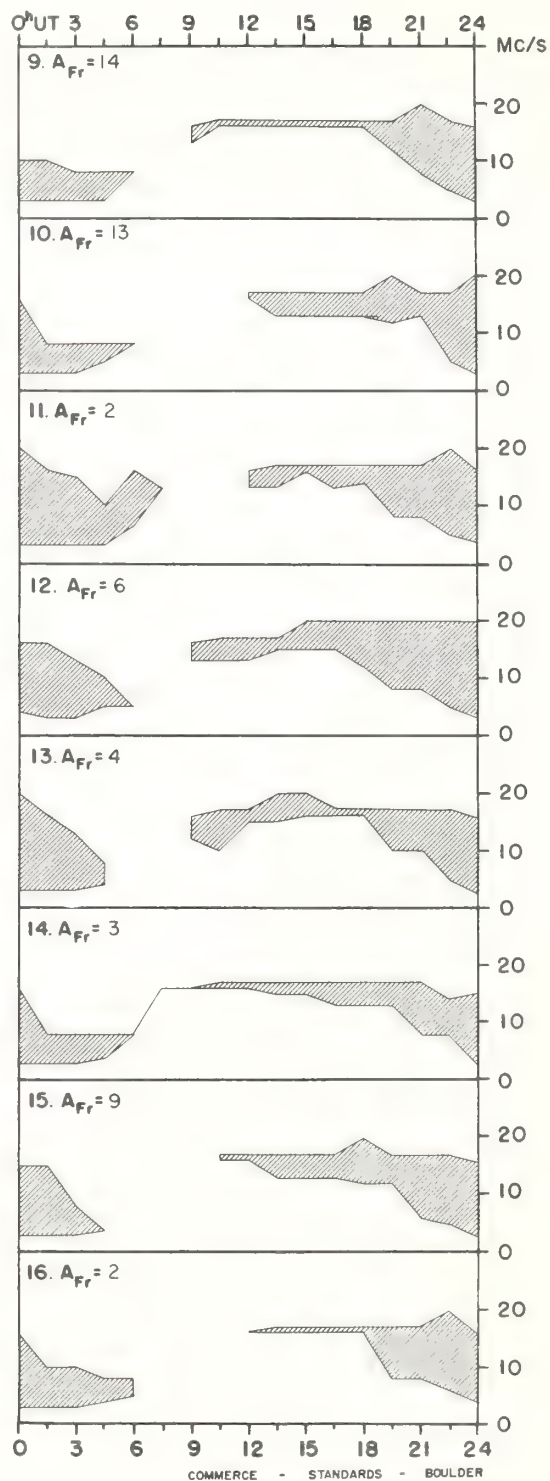
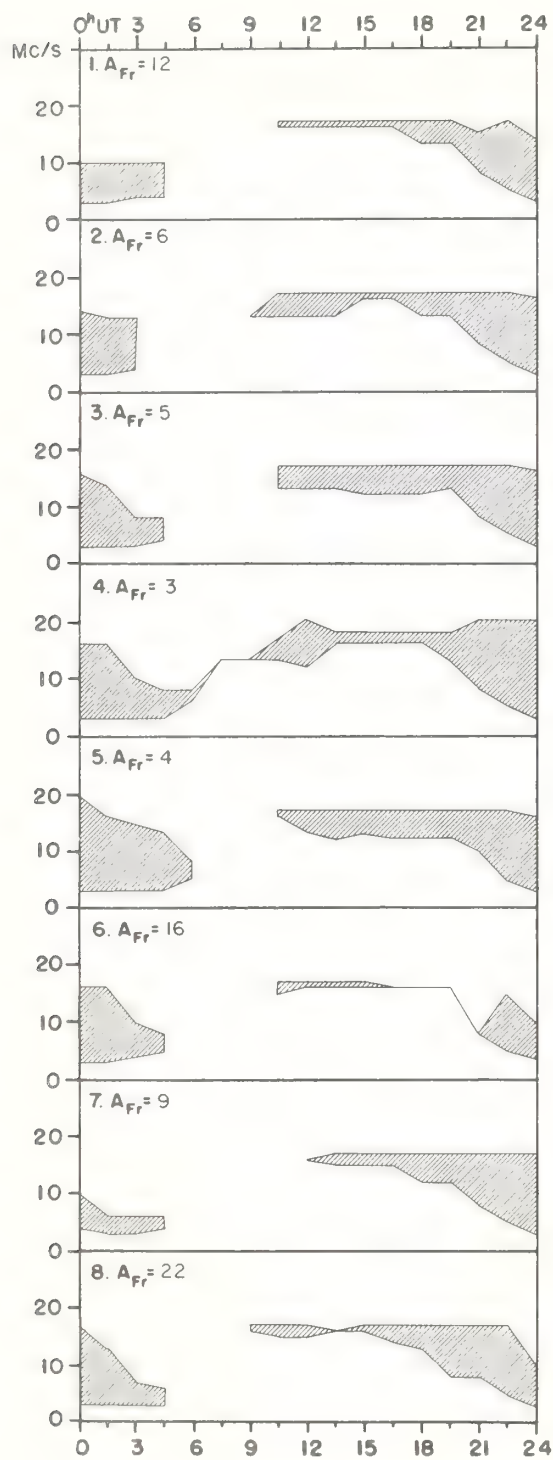
I Range of reports



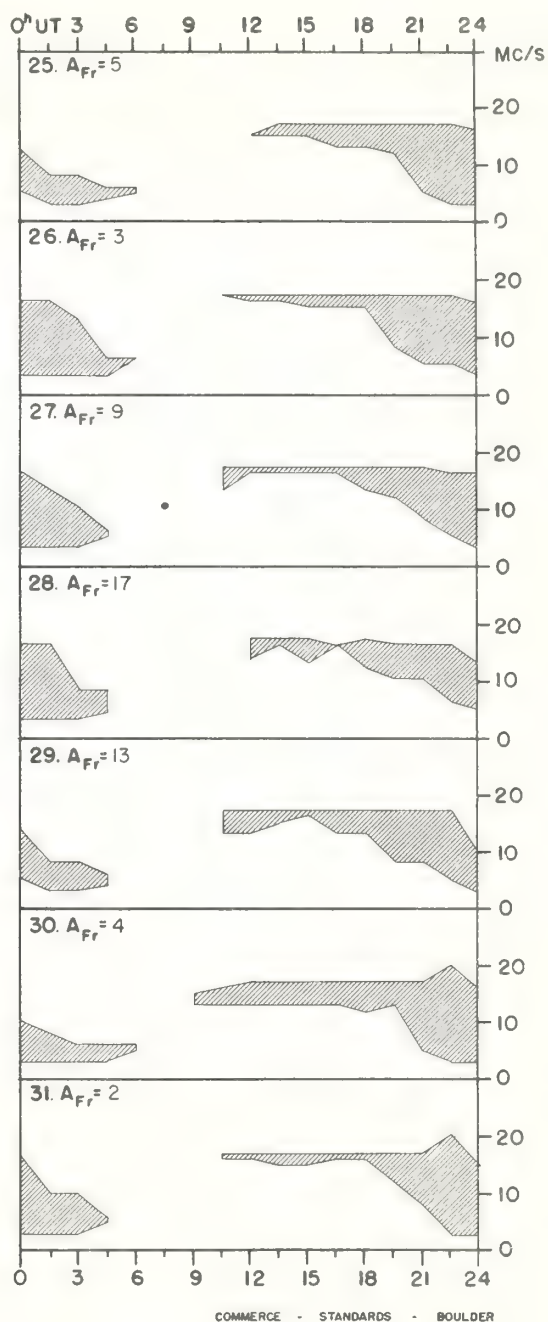
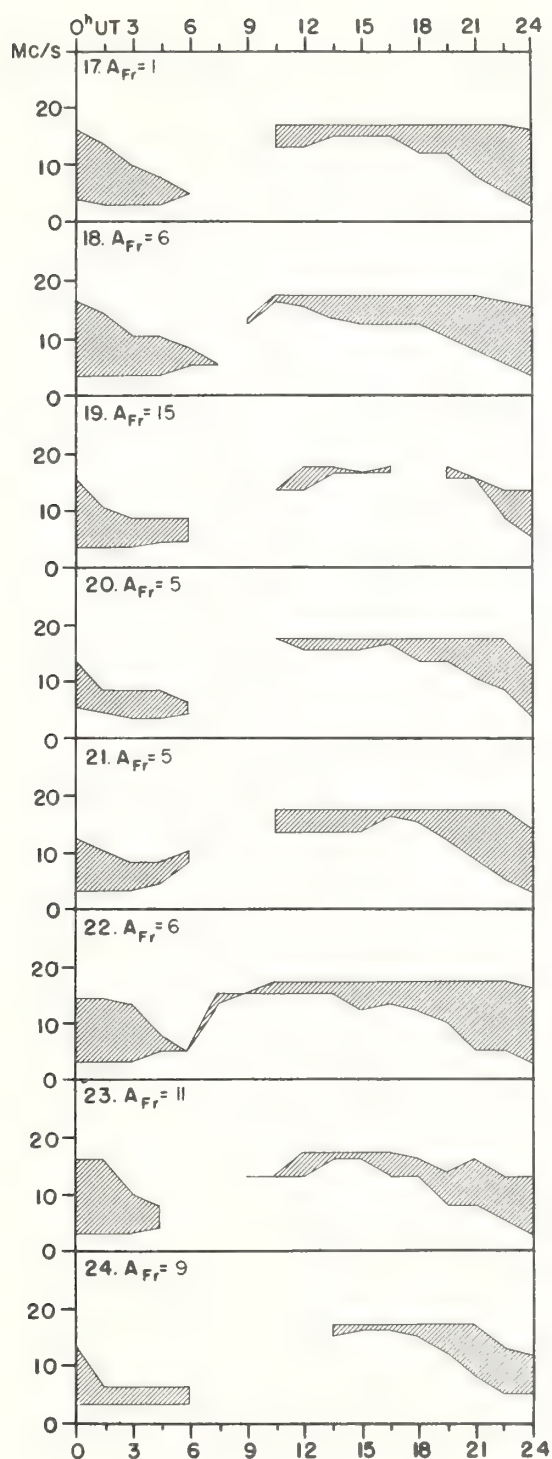
## HIGH LATITUDE



JULY 1965



JULY 1965



Adapted from Observations by Deutsches Bundespost

## IQSY ALERT PERIODS

INTERNATIONAL URSIGRAM  
AND WORLD DAYS SERVICE

AUGUST 1965

Aug. 1965	TIME OF ISSUE UT	ADVANCE GEOPHYSICAL ALERT	WORLDWIDE GEOPHYSICAL ALERT			
			NO.	TYPE	TIMING	ELABORATION
5	0400		220	Solar Activity	Exists	East Limb
6	0400		221	Solar Activity	Exists	
7	0400		222	Solar Activity	Exists	
8	0400		223	Solar Activity	Exists	
12	1745	Mt. Wilson, Solar Activity Exists, Beta Gamma Spot				
15	1420	Anacapri, Solar Flare 15/0615Z				
30	1915	Sac Peak, Solar Flare 30/1855Z				

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